

November 2007

> **2007 Utah Customer Perception Survey**

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**Summary Report**



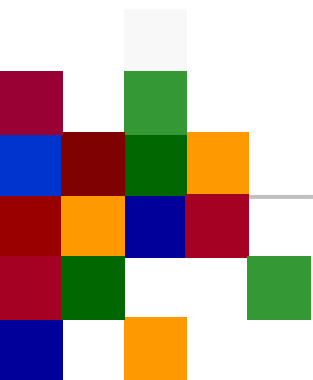
eCallogy Corp.



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## > Executive Summary

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In 2007, the Utah Department of Transportation (UDOT) again partnered with eCallogy to execute an outbound calling survey that would objectively measure resident satisfaction levels with current highway maintenance procedures.

This survey, the seventh in the series, provides insight into public perception of UDOT activities as well as a comparative measure against baseline statistics that were gathered during the 2001 survey and activities executed by UDOT in 2006/2007.

Scoring for the survey was based on the following five point scale:

1 = poor

2 = below average

3 = fair

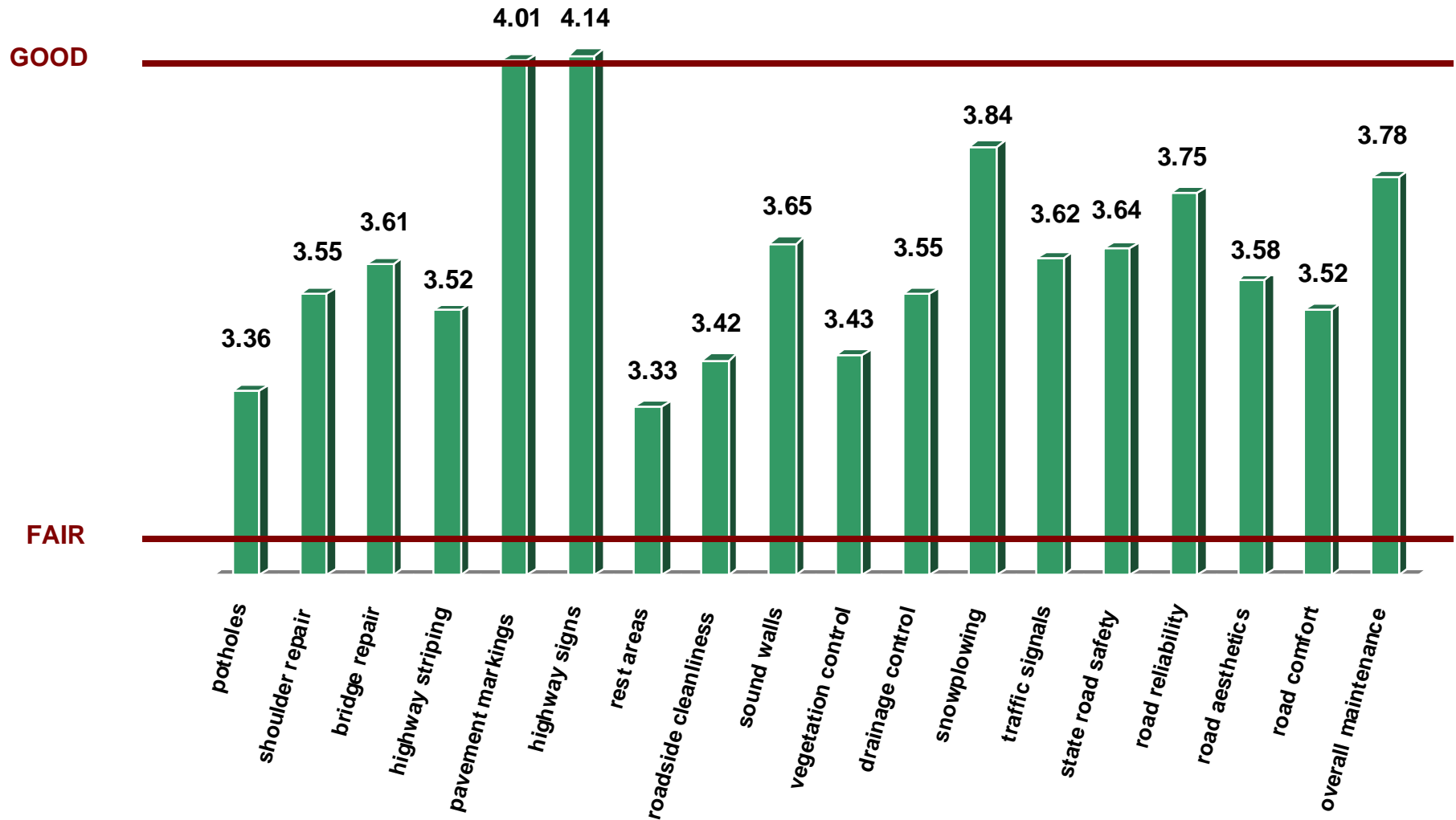
4 = good

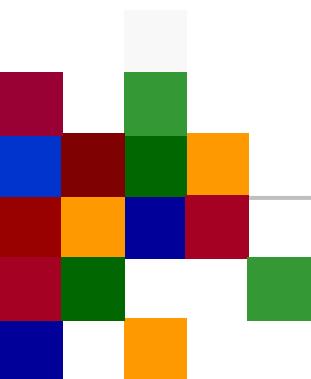
5 = very good

Scoring summaries for the entire state (see page 6) were down or remained the same in every area from 2006, and rated higher overall in every area measured when compared to the 2001 baseline results.

There were two areas that remained above good, Pavement Markings (4.01) and Highway Signs (4.14). Potholes (3.36) remained the lowest ranked category, but was one of two areas that didn't drop.

When performing t-test analysis (score correlation analysis) on each of the rated areas, it was shown that the change in 16 of the 18 mean scores was statistically significant (with less than a 5% chance of Type II error in sampling). This means that we are 95% sure that activities undertaken by UDOT in 2006/2007 had an impact on the change in mean scores rather than sampling differences.





## > Purpose

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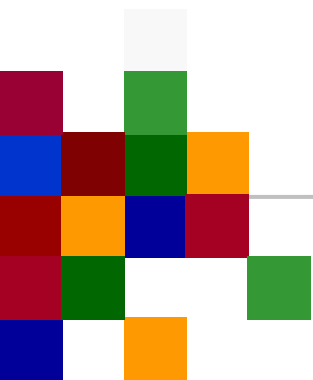
**The purpose of this document is to summarize the survey that was completed by eCallogy for UDOT in 2007.**

**This first survey conducted in 2001 was to initially measure current resident perceptions as well as provide a baseline for comparing future survey results.**

**The surveys that were conducted in 2002, 2003, 2004, 2005, 2006 and 2007 have provided an objective measure of initiatives that have been undertaken by UDOT since the initial survey. The public perception of current UDOT initiatives, whether from UDOT activities, Public Relations, or reaction time will be seen in the comparison between 2001, 2002, 2003, 2004, 2005, 2006 and 2007 results at both a state and regional level.**

**In addition, changes in results have been tested for statistical significance to determine if differences in scores are due to sample differences or actual changes in overall public perception.**





## > Methodology

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UDOT provided eCallogy with an 18 question survey that was to be used to evaluate and objectively measure public perception of current maintenance activities. This survey was identical to the survey conducted in 2001 and 2002 with the inclusion of qualitative responses that were added to the 2002 survey questions related to pothole maintenance, highway striping, and overall maintenance. The 2003, 2004, 2005, 2006 and 2007 surveys are identical. The qualitative portion of the survey was captured by our surveyors verbatim and has been collectively presented based on the information that was captured.

The same four regions that were identified in 2001 were used for the survey in 2007. Prospective respondents were identified based on their geographic location only. Surveys were conducted via telephone and both quantitative ratings and qualitative comments were captured with the use of a Computer Assisted Telephone Interview (CATI). Data was captured and random checks completed to assure that both response ranges and quantitative variables aligned with questioning data. Final data files were captured and analyzed at the state, regional, and district levels as defined in the initial Statement of Work.

Traditional data analysis techniques (mean calculation, standard deviation, percentage) and explanatory statistical analysis techniques (t-stat correlation, gap analysis, one-way variance analysis) were used to interpret objective data obtained from the telephone survey. Statistical significance of 95%, in addition to representative sampling, determined the number of surveys conducted in each region.

A gap analysis was conducted for the overall state to compare changes in mean scores. In addition, gap analyses were performed for each region compared to 2006 state averages.

T-stat correlation measures were also conducted for each region to compare year over year changes and to determine the probability that changes in scoring were due to UDOT activities and not due to sampling variables.



**In order to gain a statistically significant representation of resident perceptions, 2,820 residents from four separate regions and three districts were randomly sampled and surveyed. Sample sizes in each region were based on population density to assure accurate representation of the entire population of Utah.**

**In addition to representing population density, sample sizes were selected to create a statistically significant number of respondents (based on mean score and initial variance). A breakout of regional sampling is as follows:**

**Region 1 (Box Elder, Davis [north], Weber, Morgan, Cache, Rich) - (n = 545)**

**Region 2 (Tooele, Salt Lake, Summit, Davis [south]) - (n = 1248)**

**Region 3 (Juab, Utah, Wasatch, Duchesne, Uintah, Daggett) - (n = 633)**

**Region 4 - (n = 394)**

**Cedar City District (Millard, Iron, Beaver, Washington) - (n = 173)**

**Richfield District (Sanpete, Sevier, Piute, Wayne, Garfield, Kane) - (n = 165)**

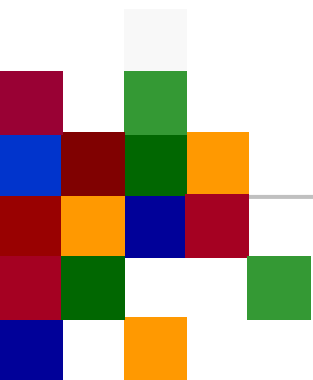
**Price District (Carbon, Emery, Grand, San Juan) - (n = 56)**

**Results from each region showed measurable variation among each region / district. Large sample sizes offset low variations in the overall scores in the establishment of statistically significant numbers.**



**Sample characteristics required only that an individual be a driver in the identified geographic area.**

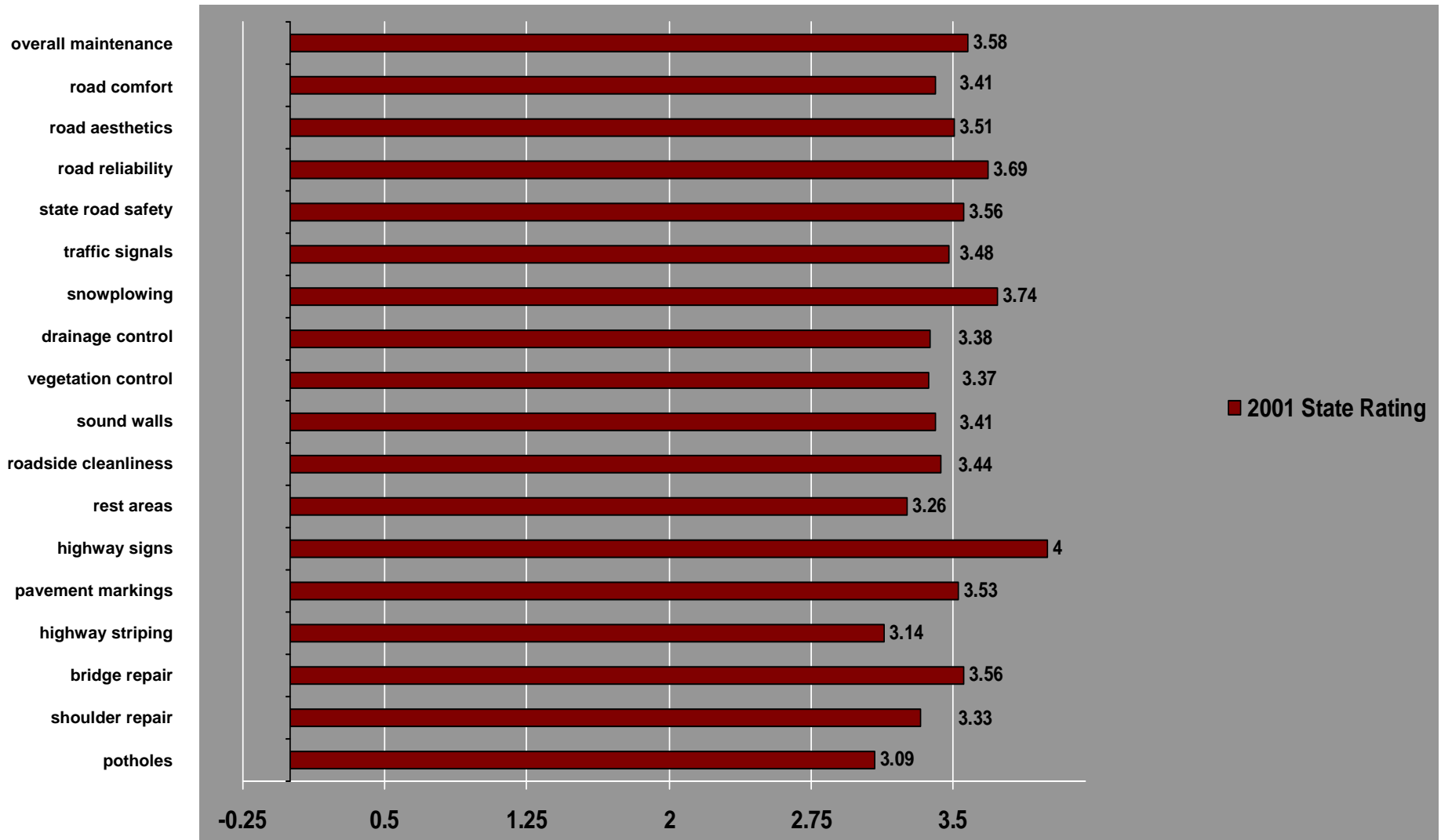
**Demographic information was not captured during this campaign at the request of UDOT, thus correlations with public perception and any demographic criterion are not included in this report.**



## > 2001 Results Summary

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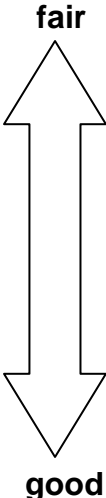


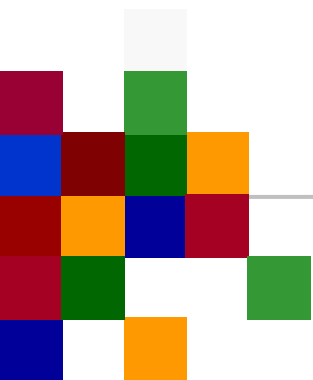




In 2001, 2813 surveys were conducted in the state across four separate regions. Average results for each question rated above “fair”. However, only one question, that related to highway signage, averaged at the “good” rating.

Comparing public perception, which was captured in the surveys, to differing statewide goals for the survey resulted in the following differences:

	Rating	Survey Question Percentage at or Above Rating
	3	100%
	3.25	88.9%
	3.5	44.4%
	3.75	5.6%
	4	5.6%

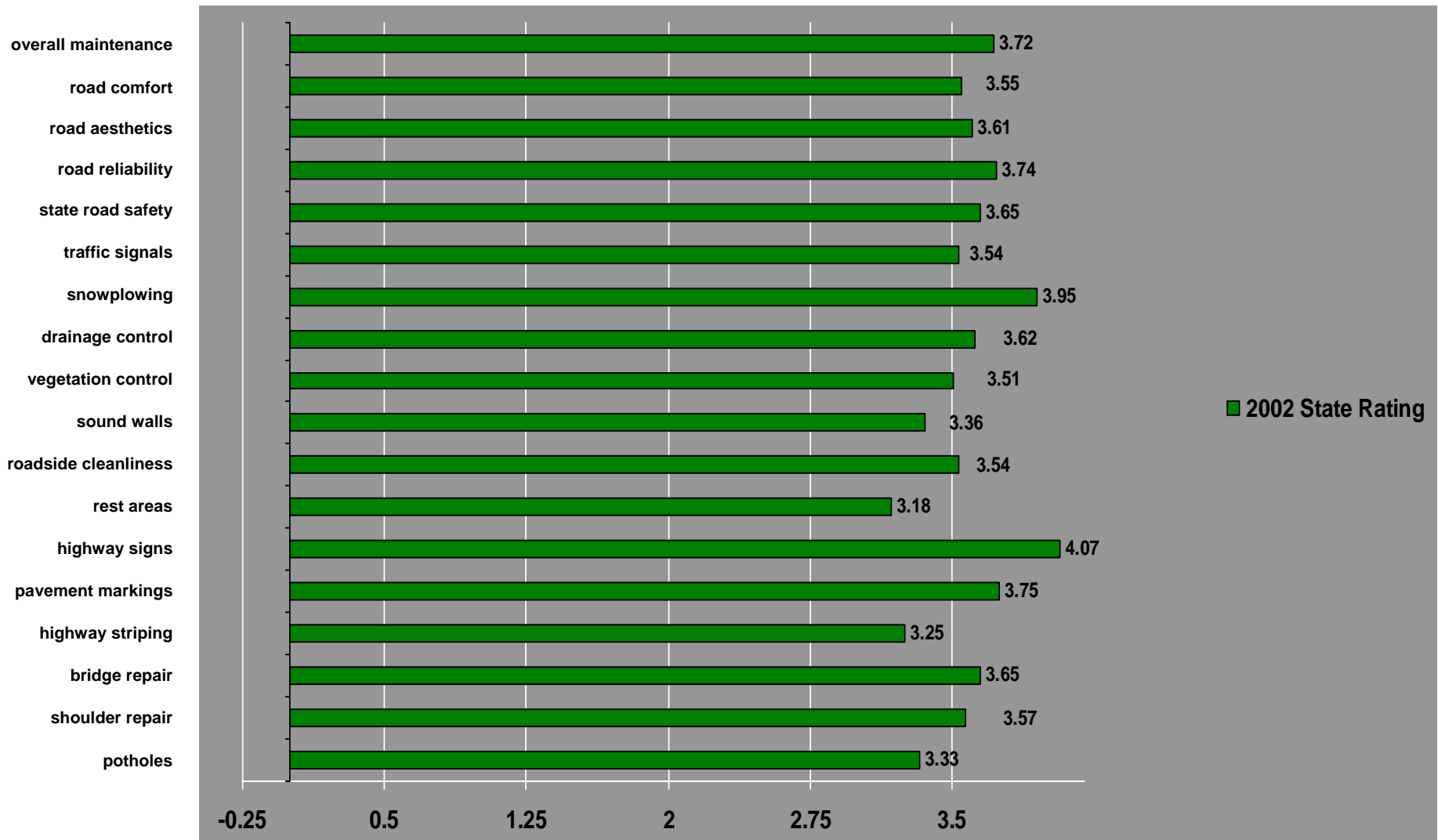


## > 2002 Results Summary

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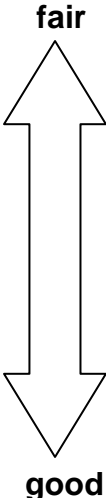


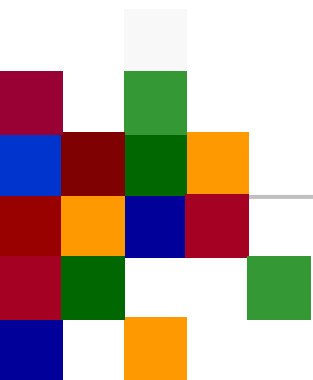




In 2002, 2,512 surveys were conducted in the state across four separate regions. Average results for each question rated above “fair”. However, again only one question, that related to highway signage, averaged at the “good” rating. Significant improvements, can be seen in the percentage of questions that rated above key marks in 2002.

Comparing public perception, which was captured in the surveys, to differing statewide goals for the survey resulted in the following differences:

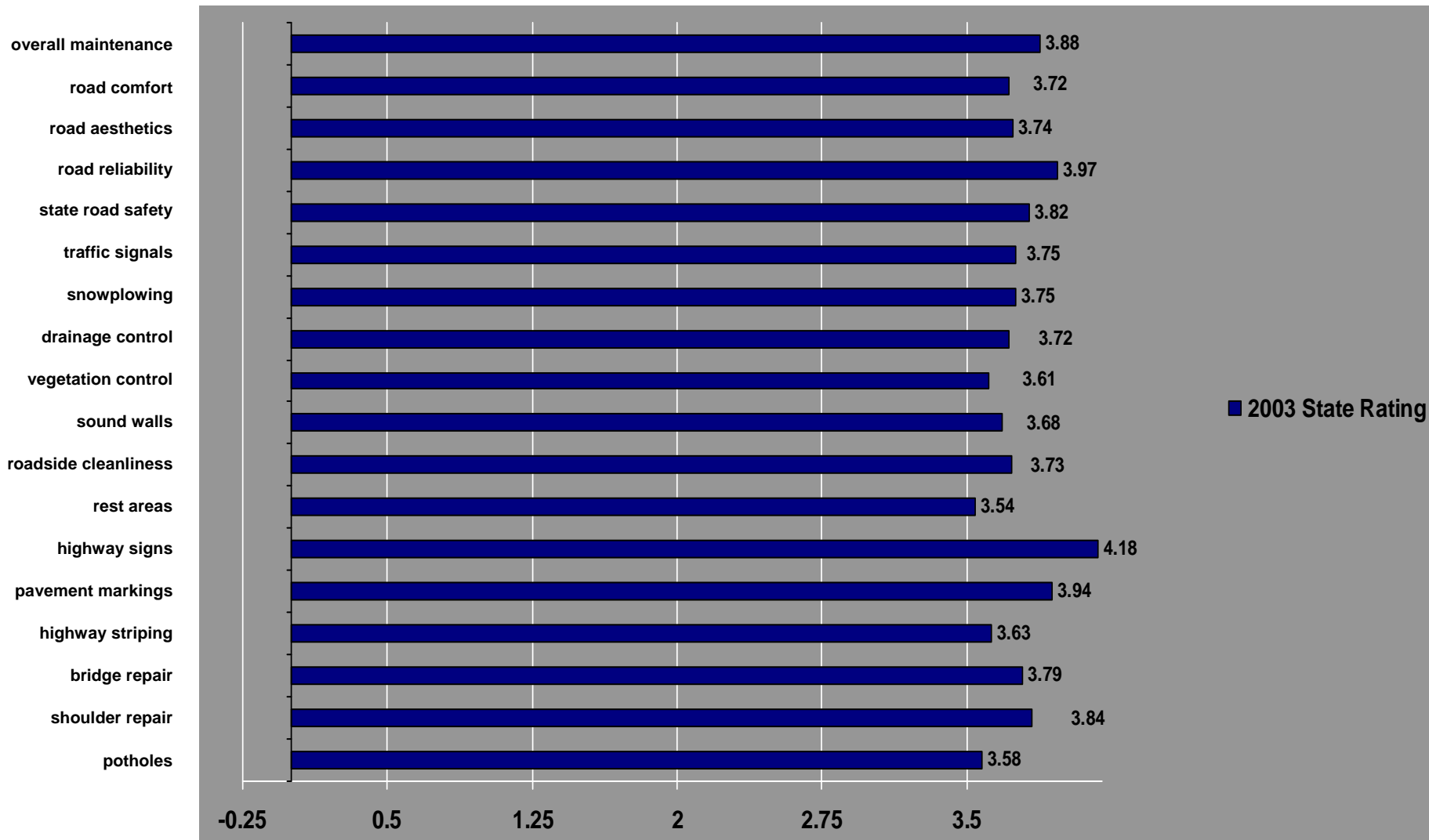
	Rating	Survey Question Percentage at or Above Rating
	3	100%
	3.25	94.4%
	3.5	77.7%
	3.75	16.6%
	4	5.6%



## > 2003 Results Summary

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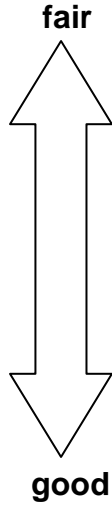




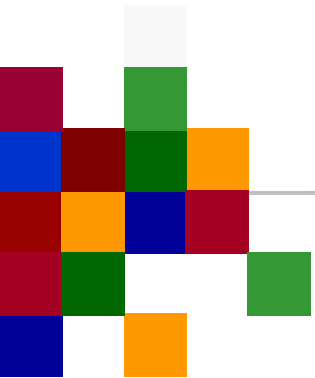


In 2003, 3,001 surveys were conducted in the state across four separate regions. Average results for each question rated above “fair”. However, again only one question, that related to highway signage, averaged at the “good” rating again in 2003. Results above several ratings increased noticeably in the different areas.

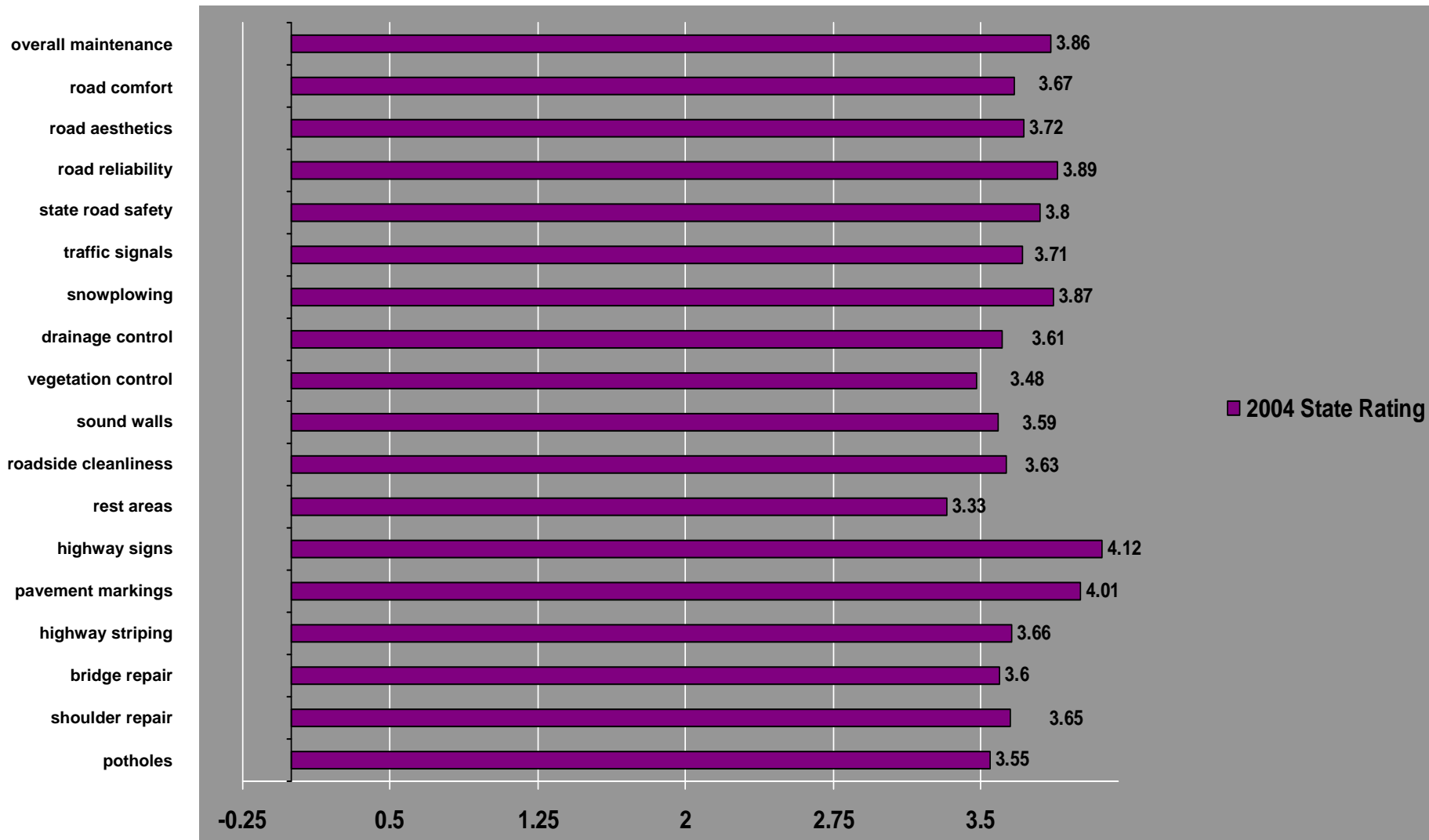
Comparing public perception, which was captured in the surveys, to differing statewide goals for the survey resulted in the following differences:



Rating	Survey Question Percentage at or Above Rating
3	100%
3.25	100%
3.5	100%
3.75	50.0%
4	5.6%



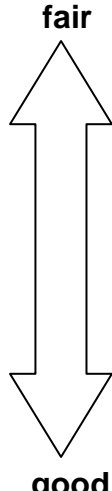
## > 2004 Results Summary



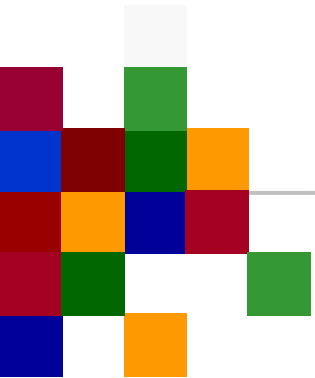


In 2004, 2,812 surveys were conducted in the state across four separate regions. Average results for each question rated above “fair”. Two questions, highway signage and pavement markers averaged at the “good” rating. Three areas averaged higher than 2003, snowplowing, pavement markings, and highway striping. Fifteen areas decreased, with rest areas, bridge repair, and shoulder repair falling the furthest.

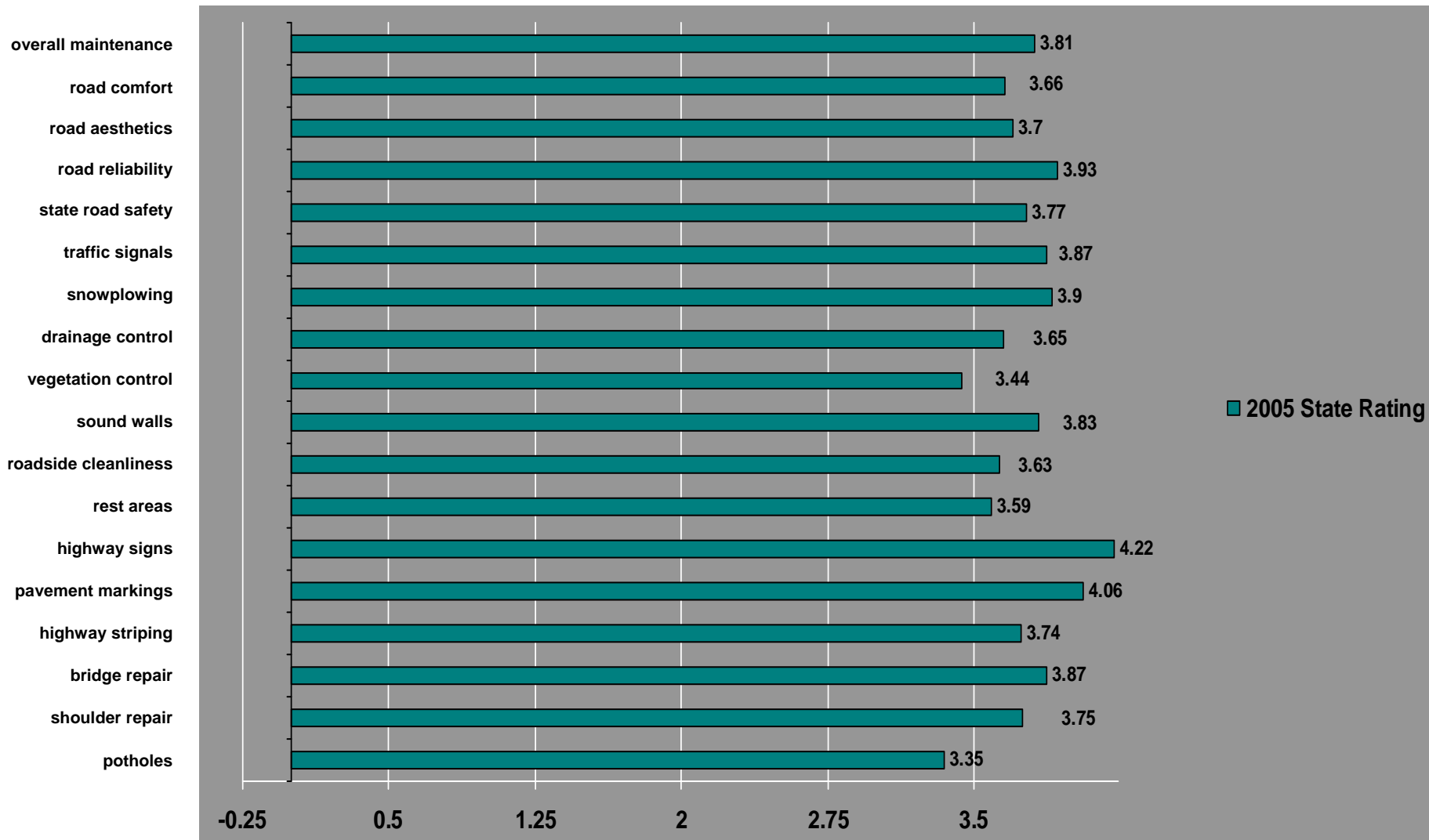
Comparing public perception, which was captured in the surveys, to differing statewide goals for the survey resulted in the following differences:

	Rating	Survey Question Percentage at or Above Rating
	3	100%
	3.25	100%
	3.5	88.9%
	3.75	33.3%
	4	11.1%





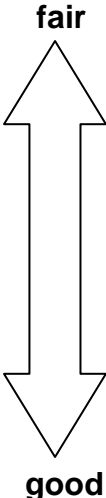
## > 2005 Results Summary

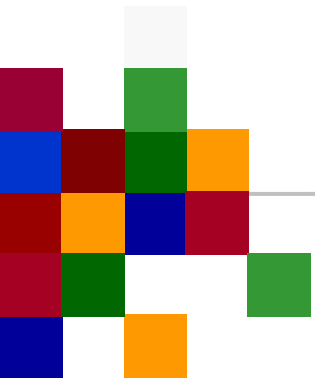




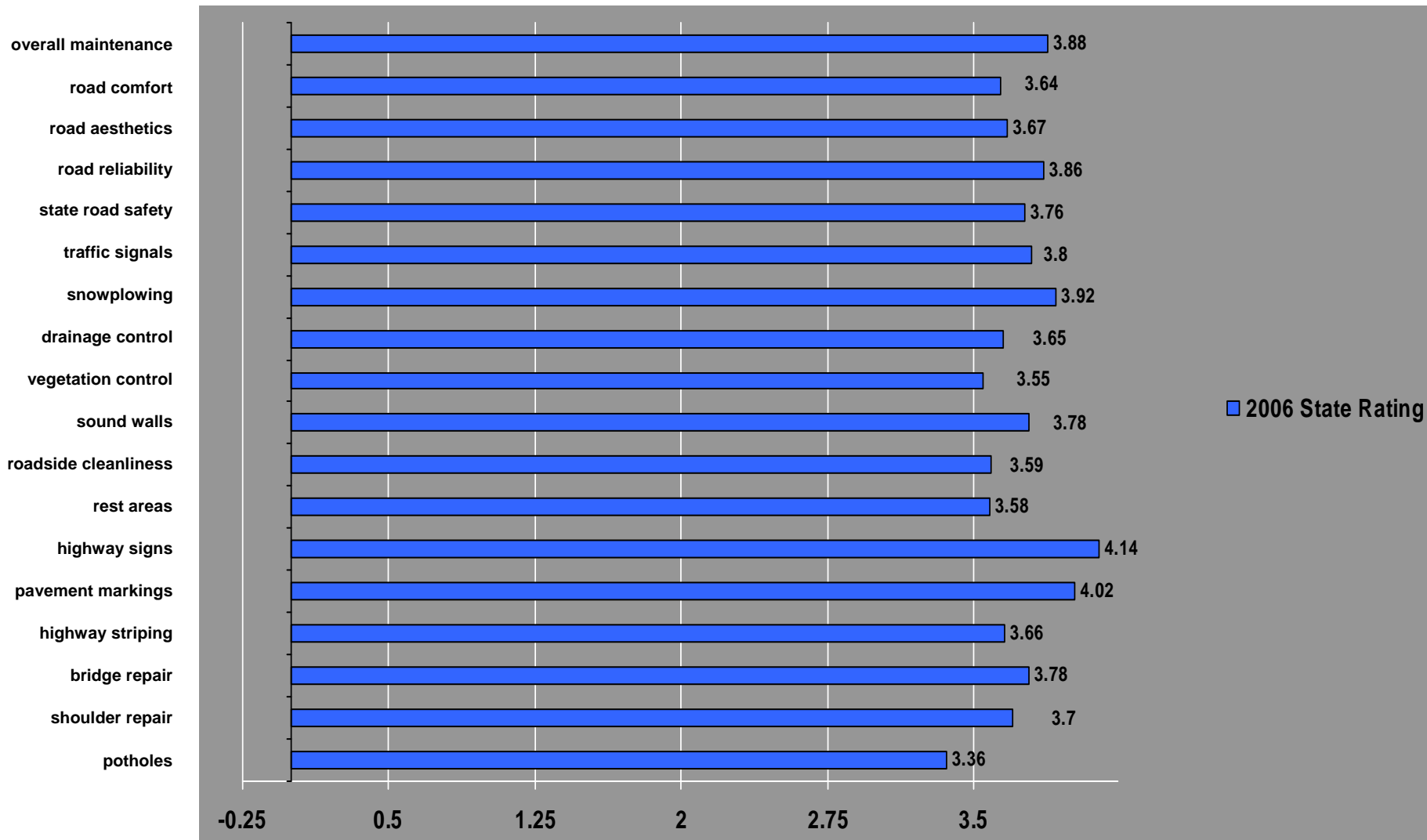
In 2005, 2,747 surveys were conducted in the state across four separate regions. Average results for each question rated above “fair”. Two questions, highway signage and pavement markers averaged at the “good” rating. Eleven areas averaged higher than 2004, with bridge repair, rest areas and sound walls making the largest gains. Six areas decreased, with potholes falling the furthest.

Comparing public perception, which was captured in the surveys, to differing statewide goals for the survey resulted in the following differences:

	Rating	Survey Question Percentage at or Above Rating
	3	100%
	3.25	100%
	3.5	88.9%
	3.75	55.6%
	4	11.1%



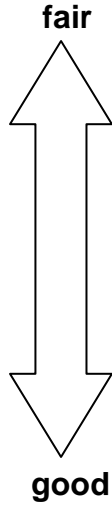
## > 2006 Results Summary



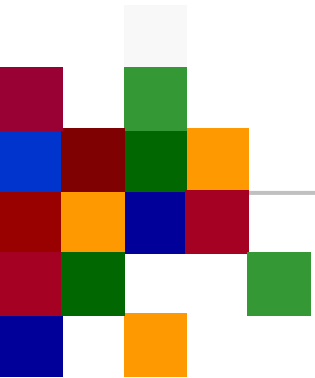


In 2006, 2,679 surveys were conducted in the state across four separate regions. Average results for each question rated above “fair”. Two questions, highway signage and pavement markers averaged at the “good” rating. Potholes was the only question that remained under the 3.5 level. Half (9 of 18) of the questions rated at 3.75 or higher.

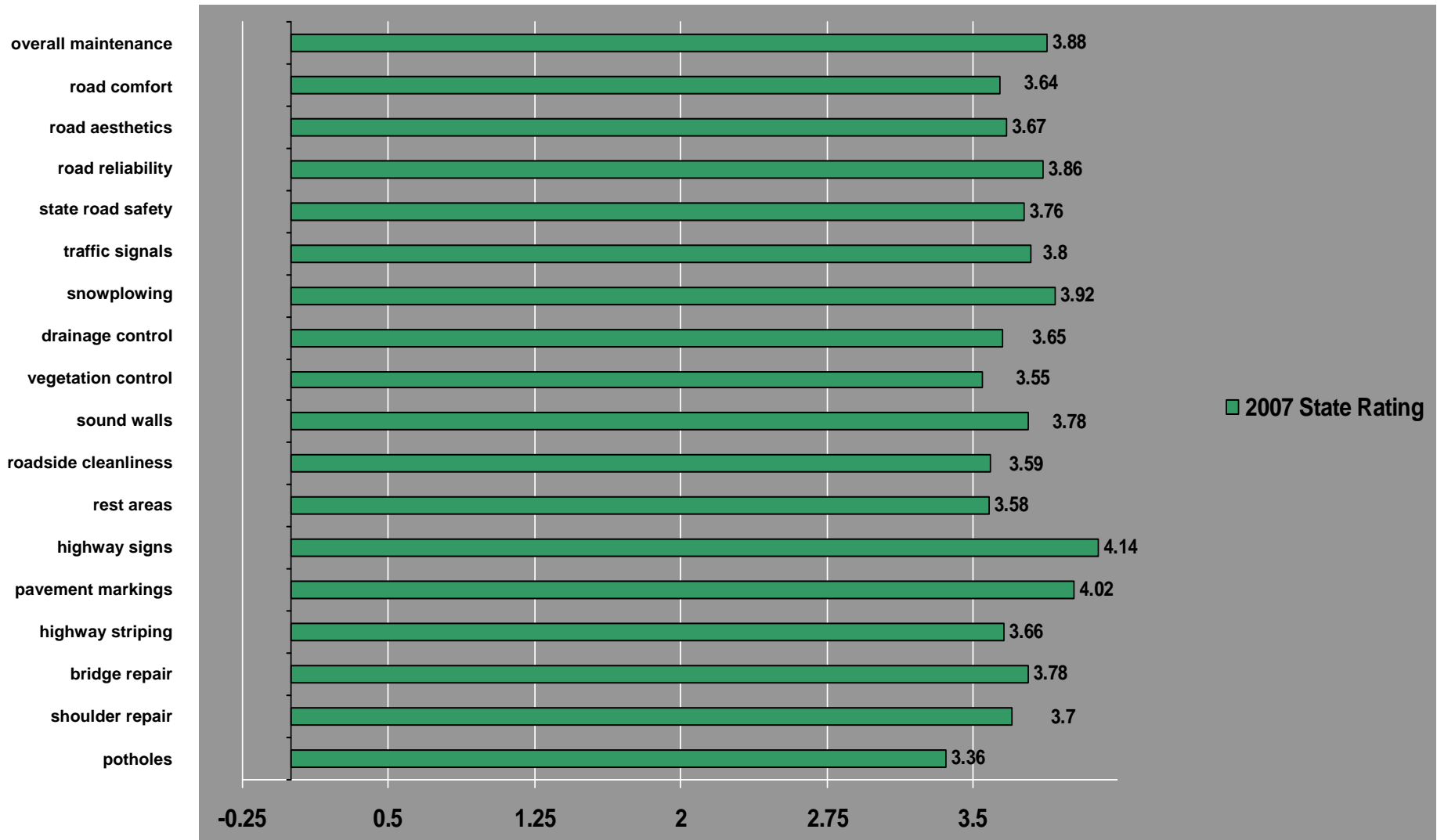
Comparing public perception, which was captured in the surveys, to differing statewide goals for the survey resulted in the following differences:



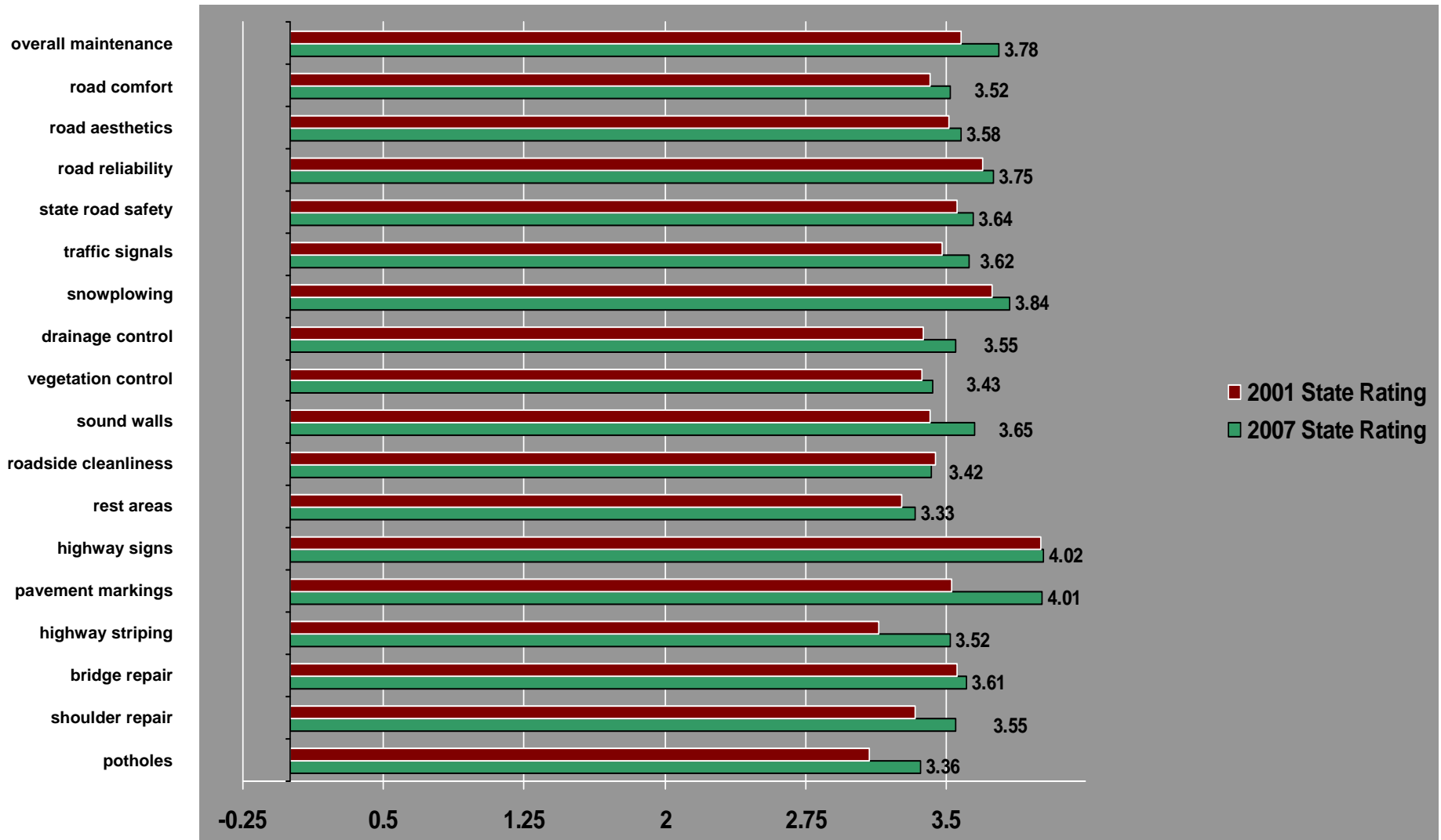
Rating	Survey Question Percentage at or Above Rating
3	100%
3.25	100%
3.5	94.4%
3.75	50%
4	11.1%

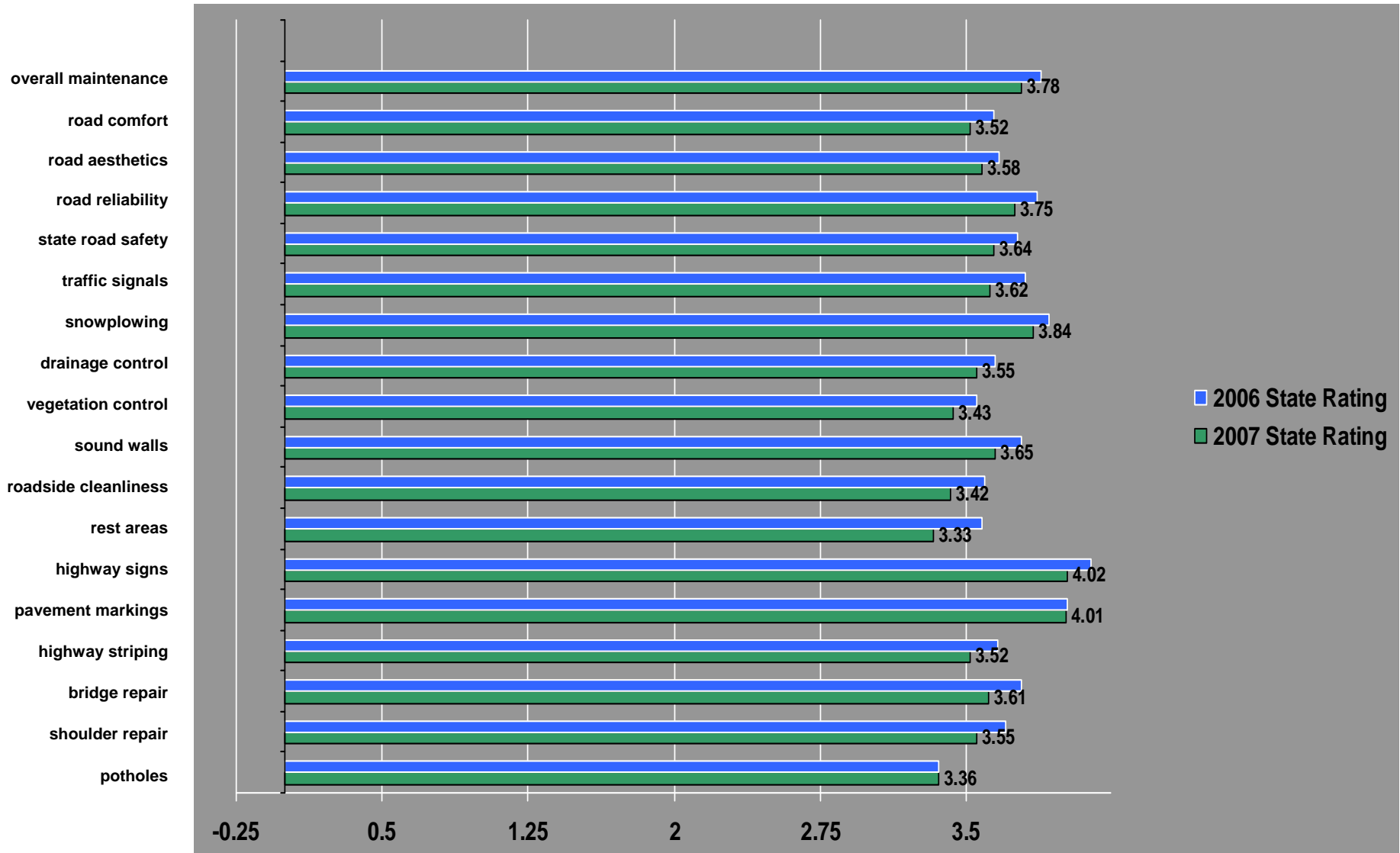


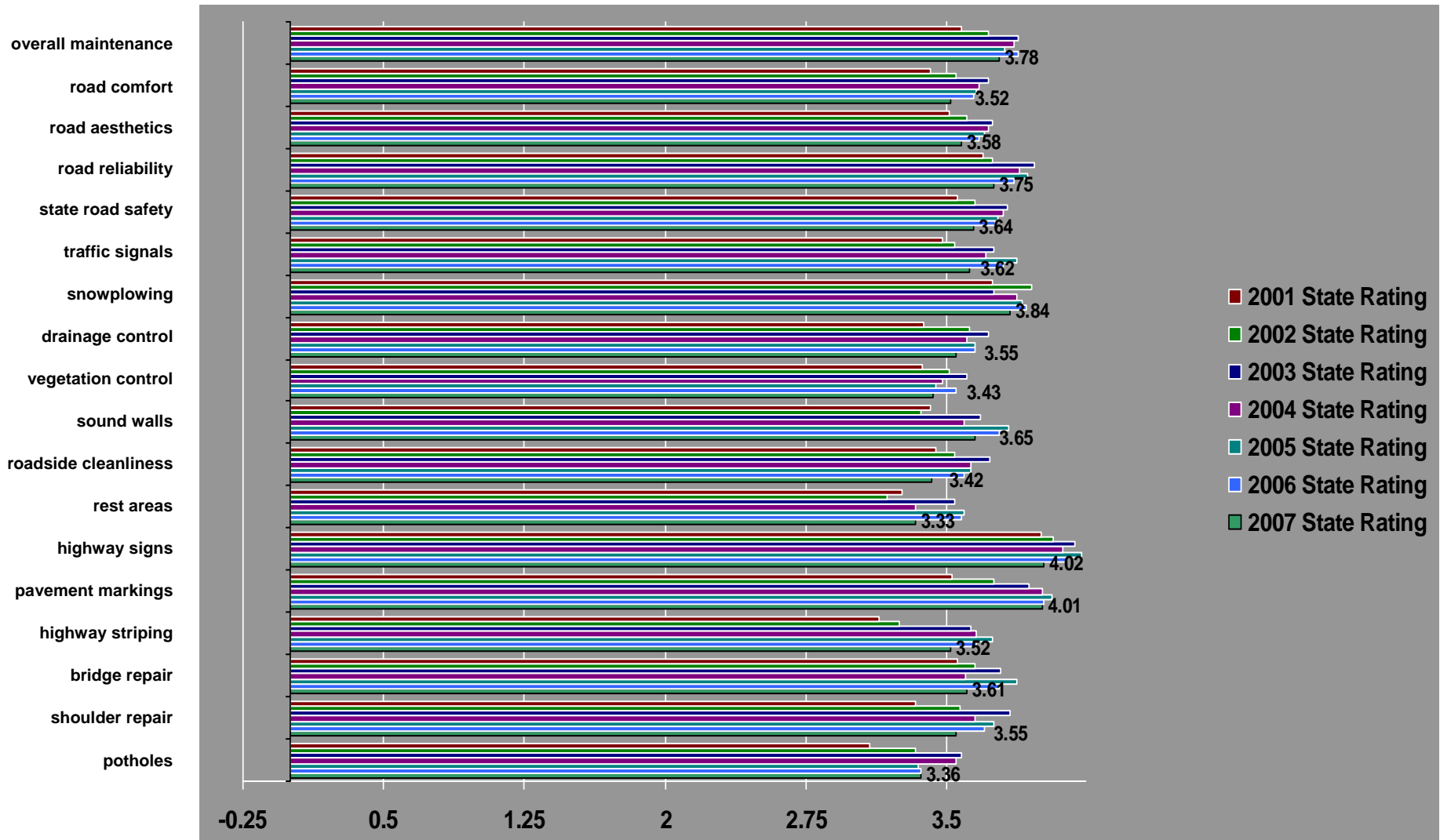
## > 2007 Results Summary







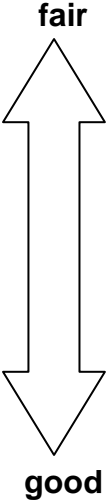






In 2007, 2,820 surveys were conducted in the state across four separate regions. Average results for each question rated above “fair” (3). Two questions, highway signage and pavement markers averaged at the “good” (4) rating. In 2006, Potholes was the only question under the 3.5 level. For 2007, rest areas, roadside cleanliness and vegetation control joined potholes under the 3.5 level. Only 5 of the 18 questions rated at 3.75 or higher.

Comparing public perception, which was captured in the surveys, to differing statewide goals for the survey resulted in the following differences:



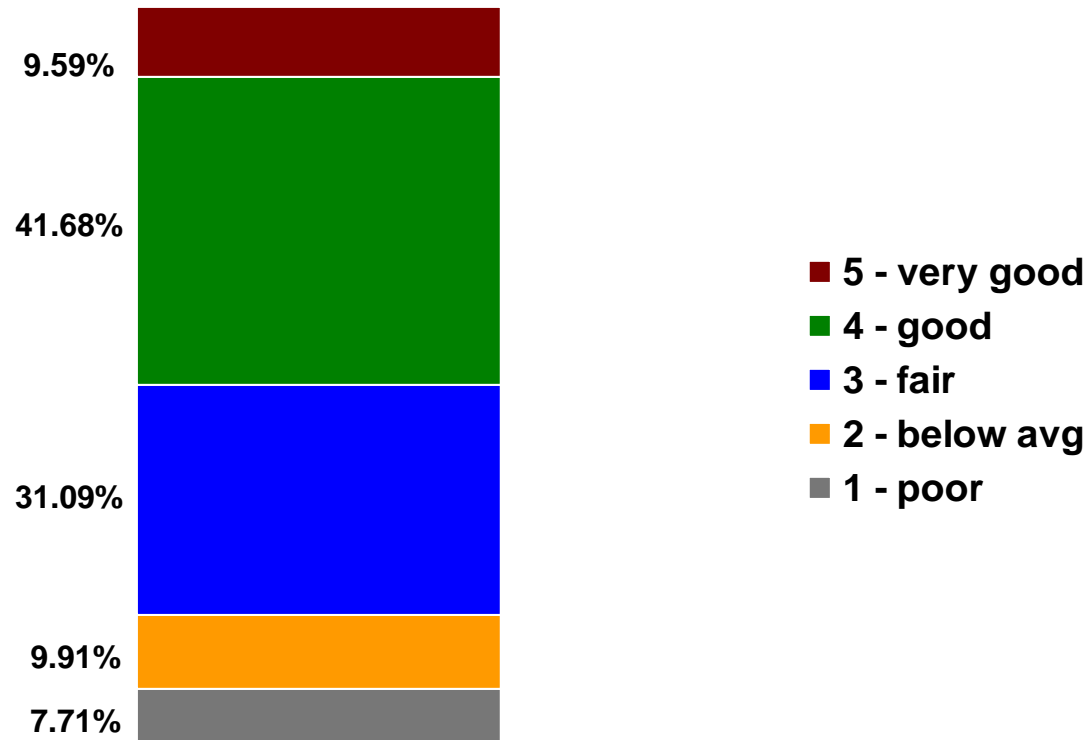
Rating	Survey Question Percentage at or Above Rating
3	100%
3.25	100%
3.5	77.8%
3.75	27.8%
4	11.1%



## How would you rate the maintenance of potholes and poor pavement?

Mean ( $\mu$ ): 3.36

Standard  
Deviation ( $\sigma$ ): 1.04



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

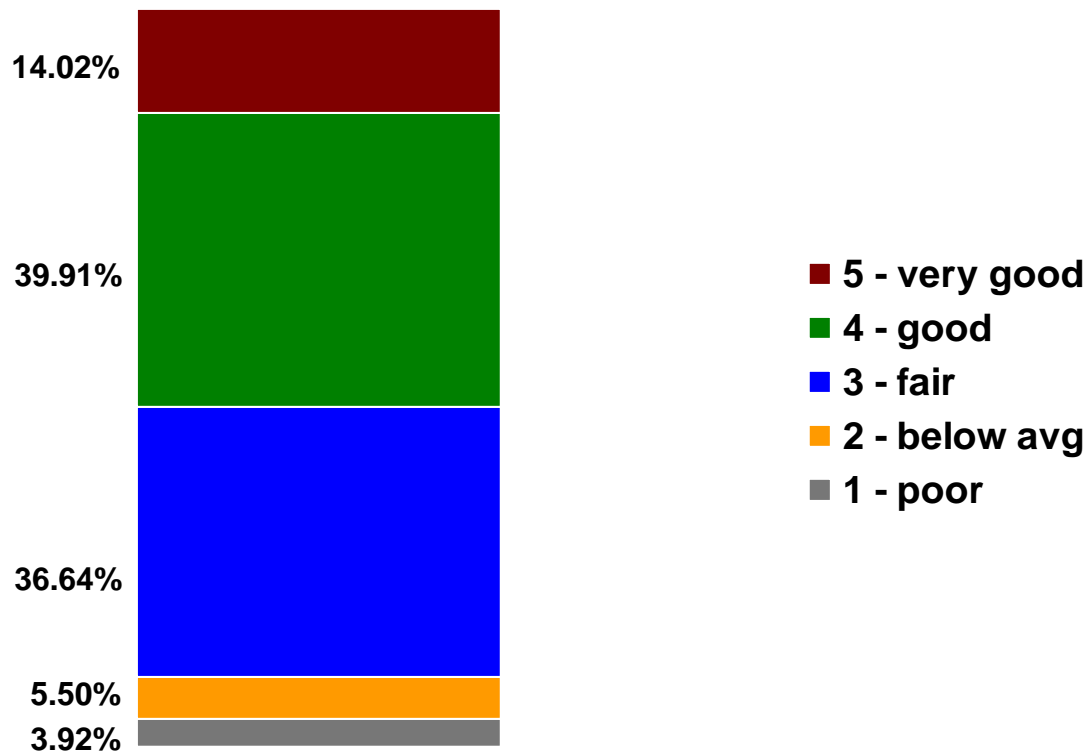
Standard deviations are calculated based on sample representations of the entire population.



## How would you rate our roadside shoulder repair?

Mean ( $\mu$ ): 3.55

Standard  
Deviation ( $\sigma$ ): 0.935



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

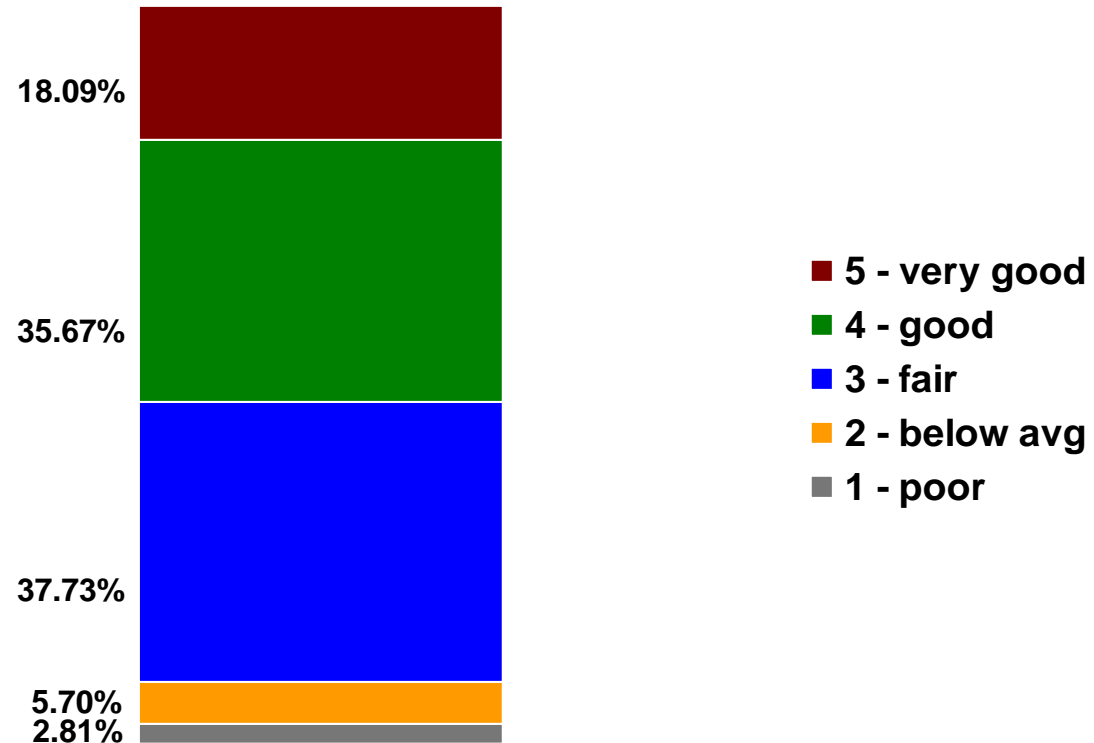
Standard deviations are calculated based on sample representations of the entire population.



## How would you rate our bridge repair?

Mean ( $\mu$ ): 3.61

Standard  
Deviation ( $\sigma$ ): 0.940



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

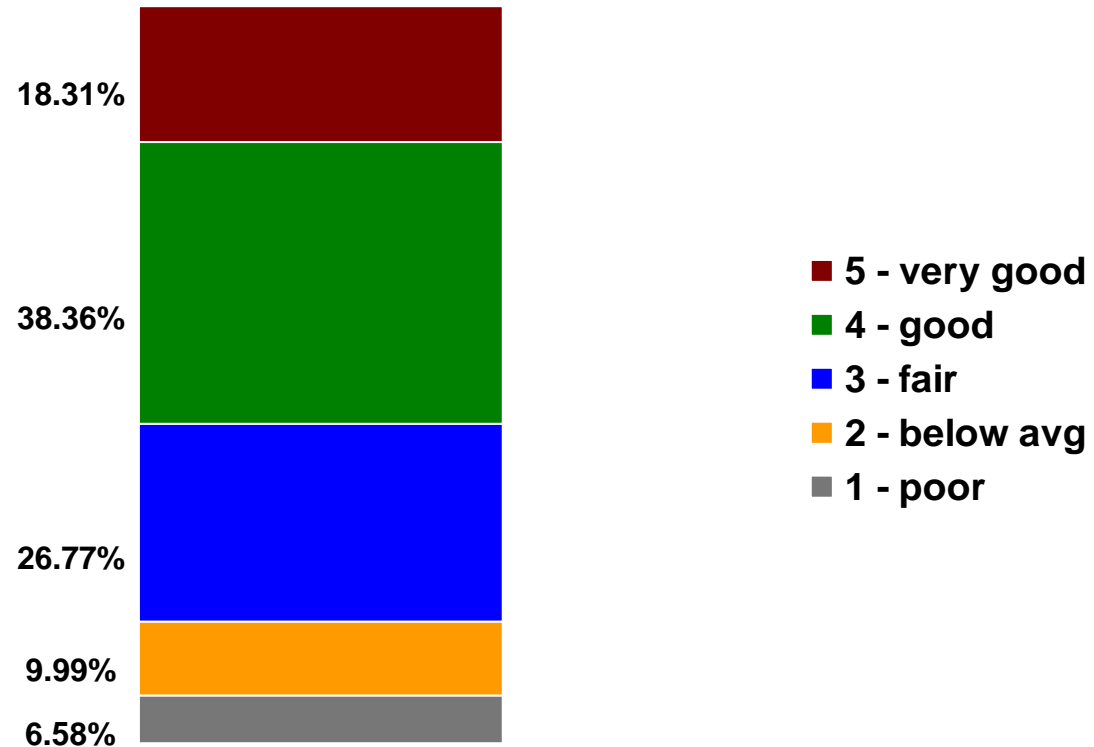
Standard deviations are calculated based on sample representations of the entire population.



## How would you rate our highway striping (painted lines)?

Mean ( $\mu$ ): 3.52

Standard  
Deviation ( $\sigma$ ): 1.10



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

Standard deviations are calculated based on sample representations of the entire population.

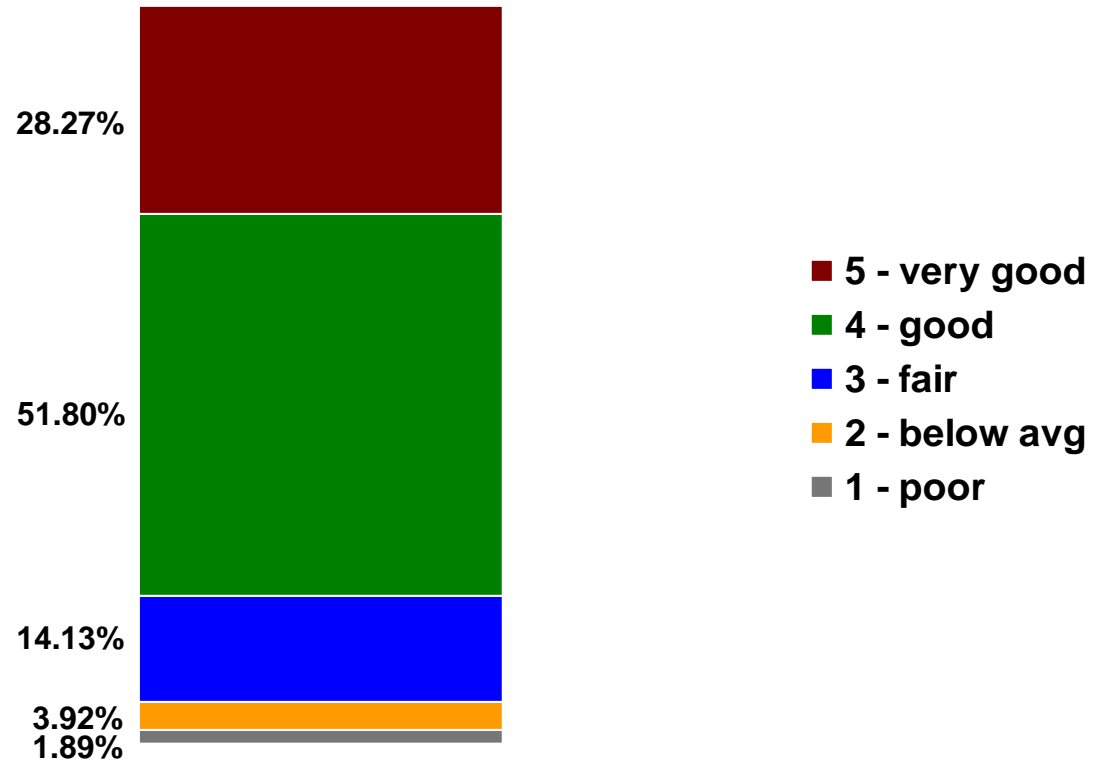




How would you rate other pavement markings such as: school crossings, turn arrows, crosswalks, and others?

Mean ( $\mu$ ): 4.01

Standard  
Deviation ( $\sigma$ ): 0.866



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

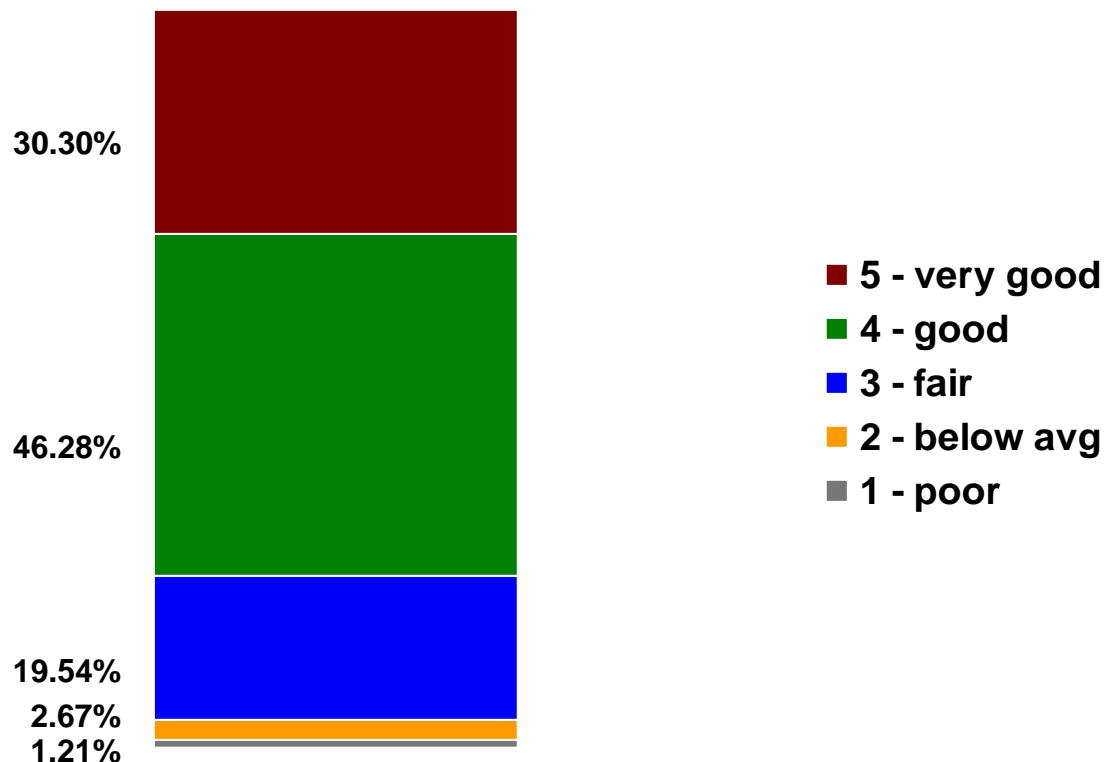
Standard deviations are calculated based on sample representations of the entire population.



## How do you rate our highway signs?

Mean ( $\mu$ ): 4.02

Standard  
Deviation ( $\sigma$ ): 0.845



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

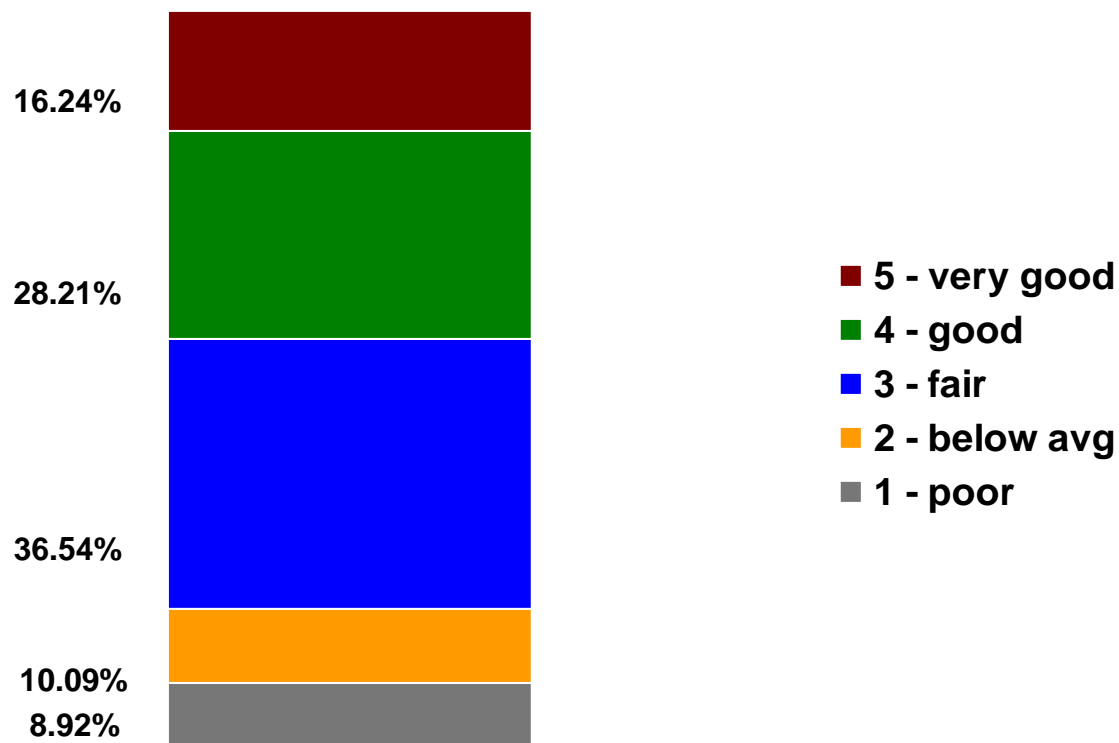
Standard deviations are calculated based on sample representations of the entire population.



## How do you rate our rest areas?

Mean ( $\mu$ ): 3.33

Standard  
Deviation ( $\sigma$ ): 1.132



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

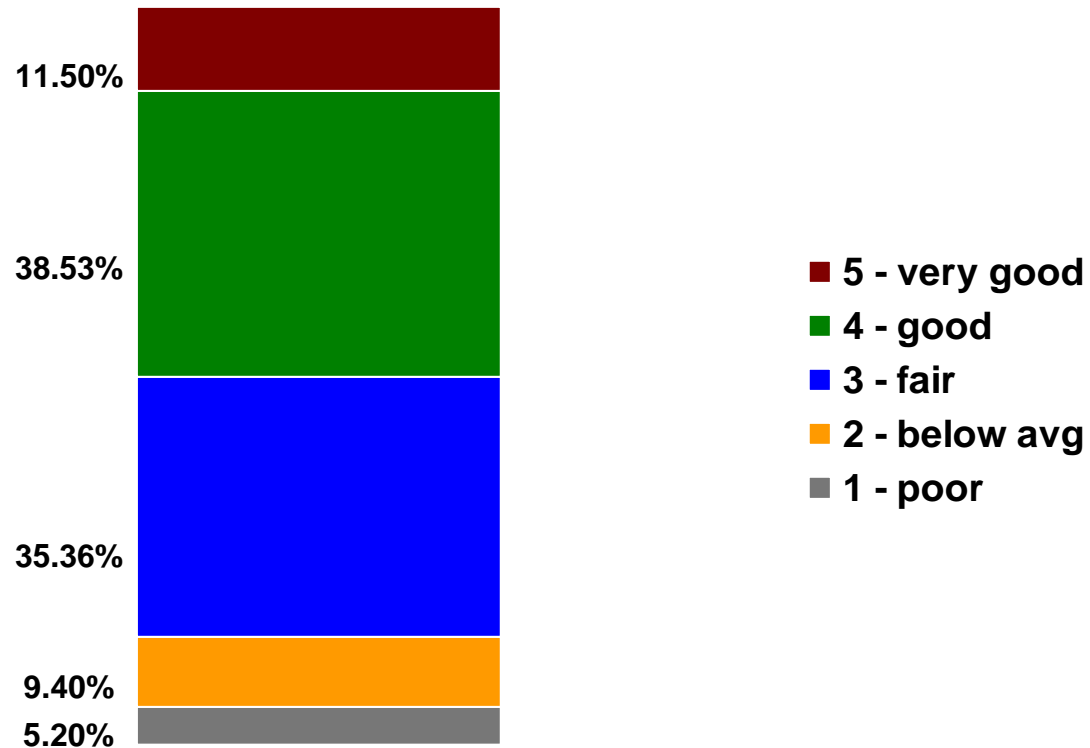
Standard deviations are calculated based on sample representations of the entire population.



## How do you rate the cleanliness of our roadsides?

Mean ( $\mu$ ): 3.42

Standard  
Deviation ( $\sigma$ ): 0.987



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

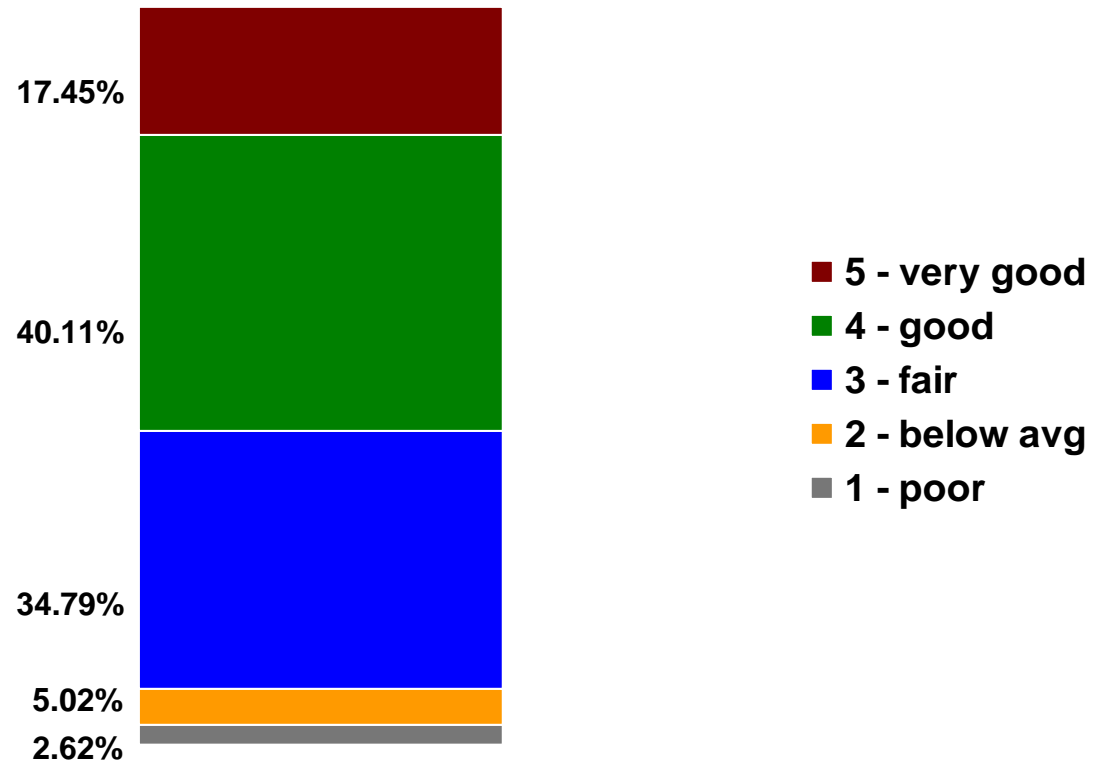
Standard deviations are calculated based on sample representations of the entire population.



## How do you rate our fencing and/or sound walls?

Mean ( $\mu$ ): 3.65

Standard  
Deviation ( $\sigma$ ): 0.914



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

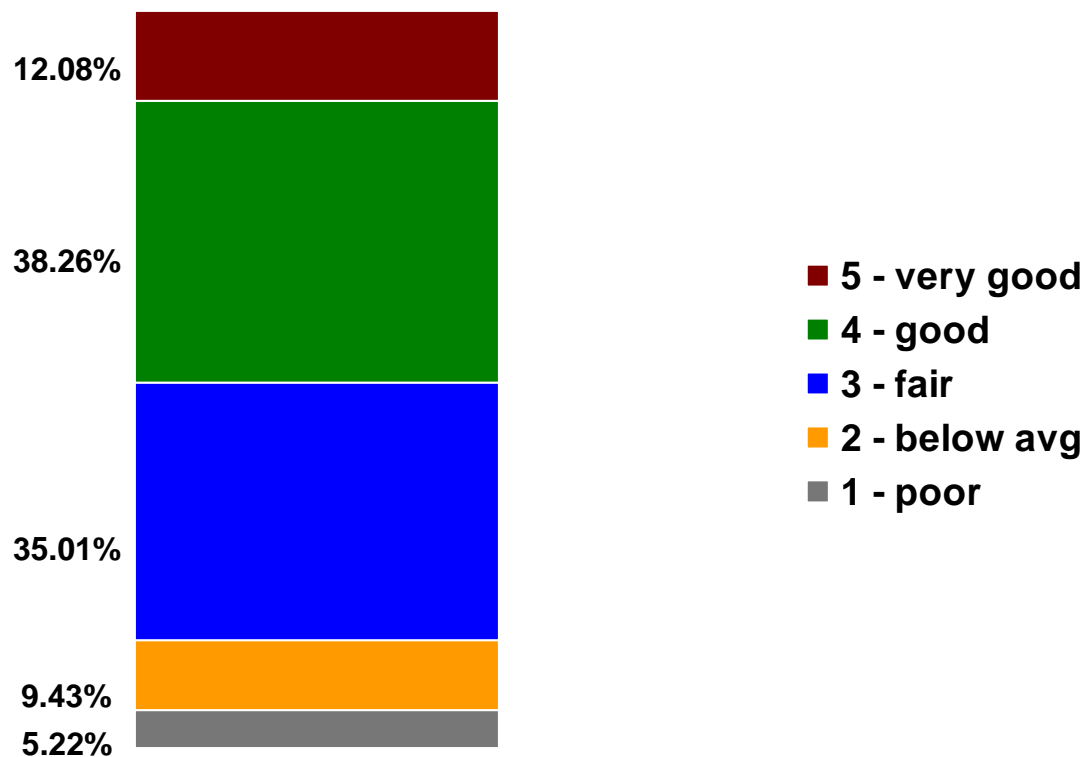
Standard deviations are calculated based on sample representations of the entire population.



## How do you rate our vegetation control?

Mean ( $\mu$ ): 3.43

Standard  
Deviation ( $\sigma$ ): 0.994



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

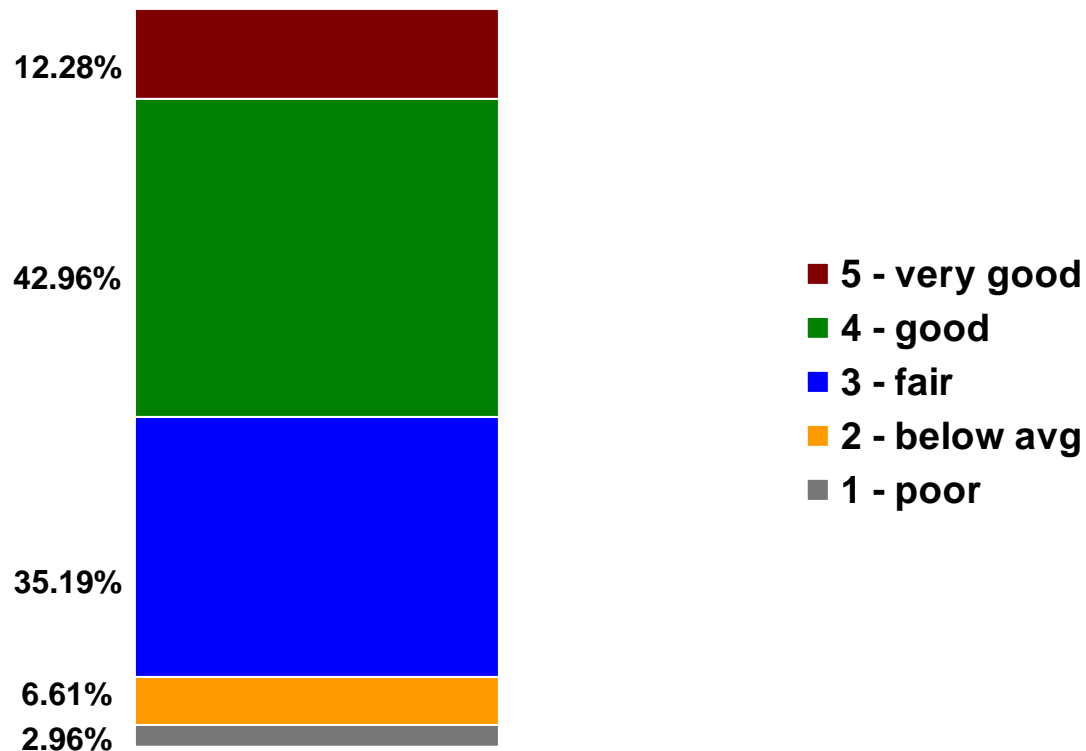
Standard deviations are calculated based on sample representations of the entire population.



## How do you rate our drainage and erosion control?

Mean ( $\mu$ ): 3.55

Standard  
Deviation ( $\sigma$ ): 0.896



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

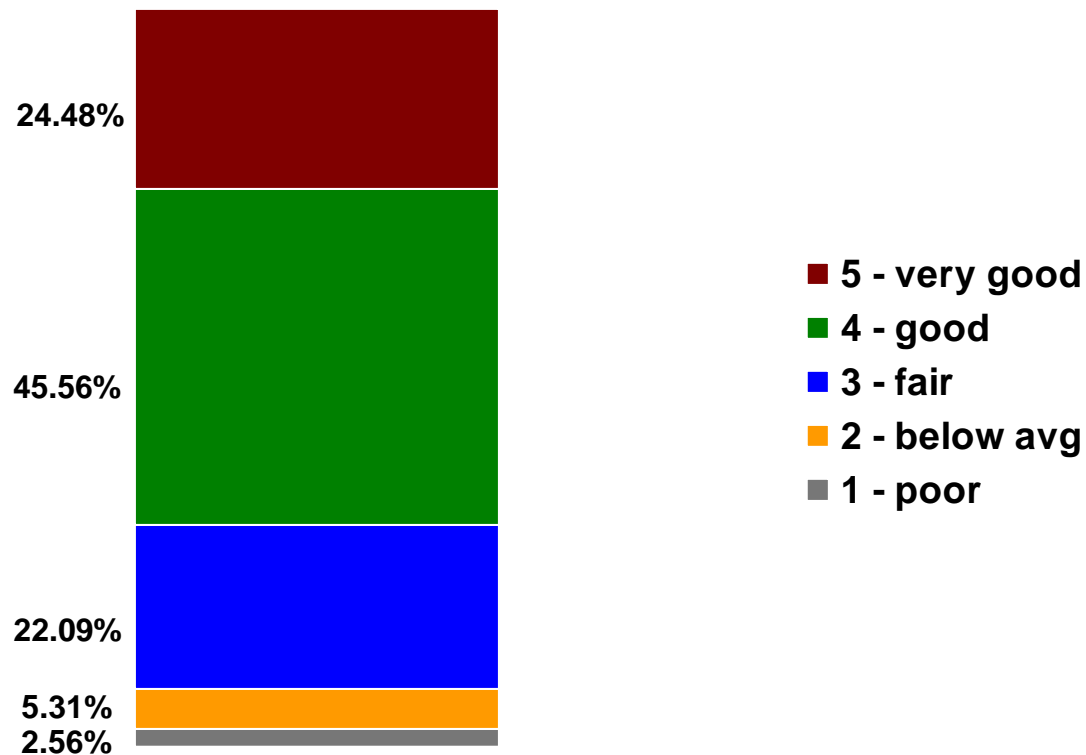
Standard deviations are calculated based on sample representations of the entire population.



## How do you rate our snowplowing?

Mean ( $\mu$ ): 3.84

Standard  
Deviation ( $\sigma$ ): 0.940



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

Standard deviations are calculated based on sample representations of the entire population.

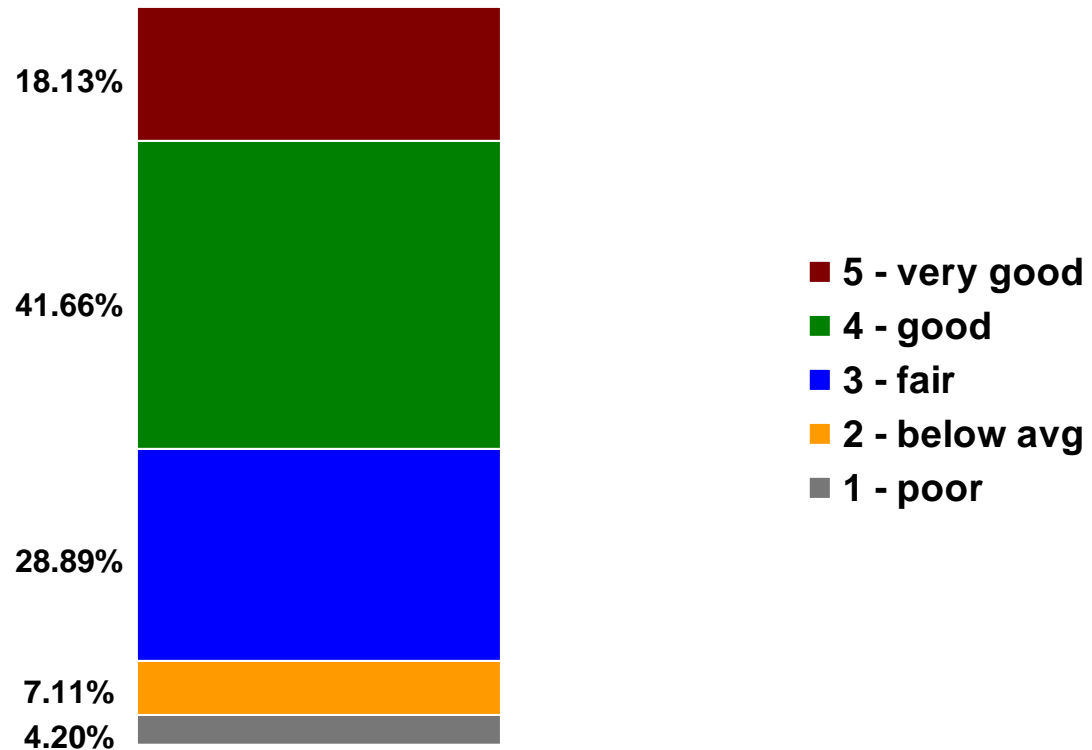




## How do you rate our traffic signals?

Mean ( $\mu$ ): 3.62

Standard  
Deviation ( $\sigma$ ): 0.996



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

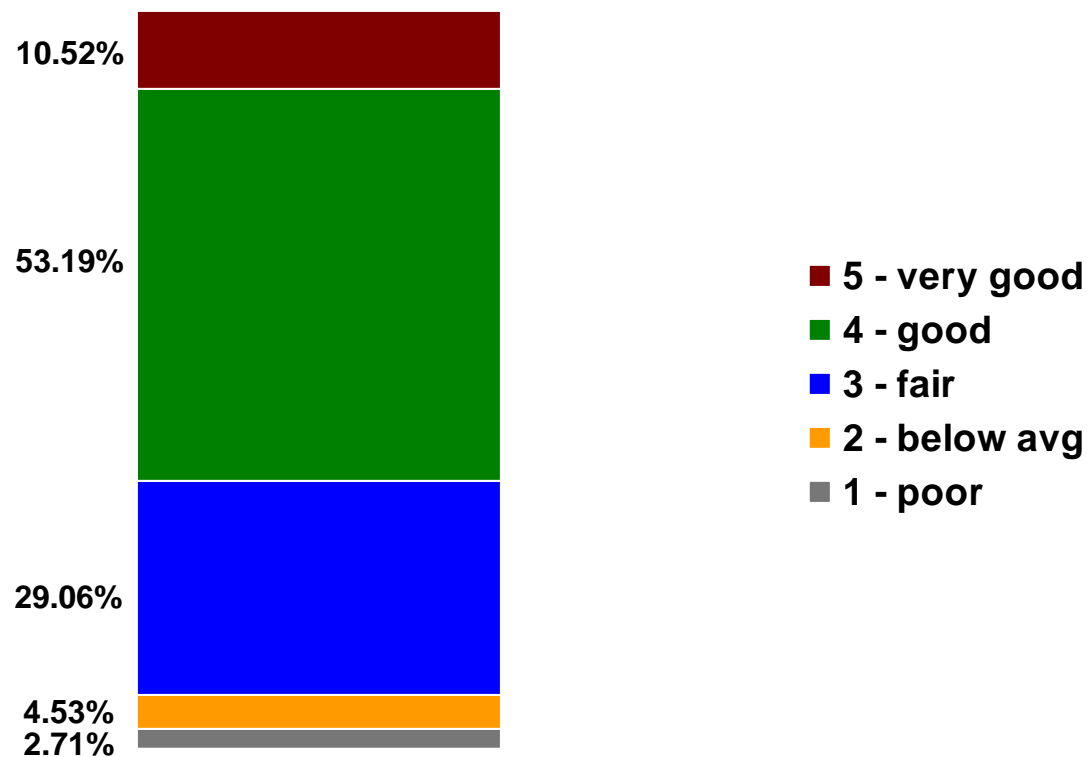
Standard deviations are calculated based on sample representations of the entire population.



As you are driving our state roads, how would you rate the overall safety of our roads?

Mean ( $\mu$ ): 3.64

Standard  
Deviation ( $\sigma$ ): 0.833



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

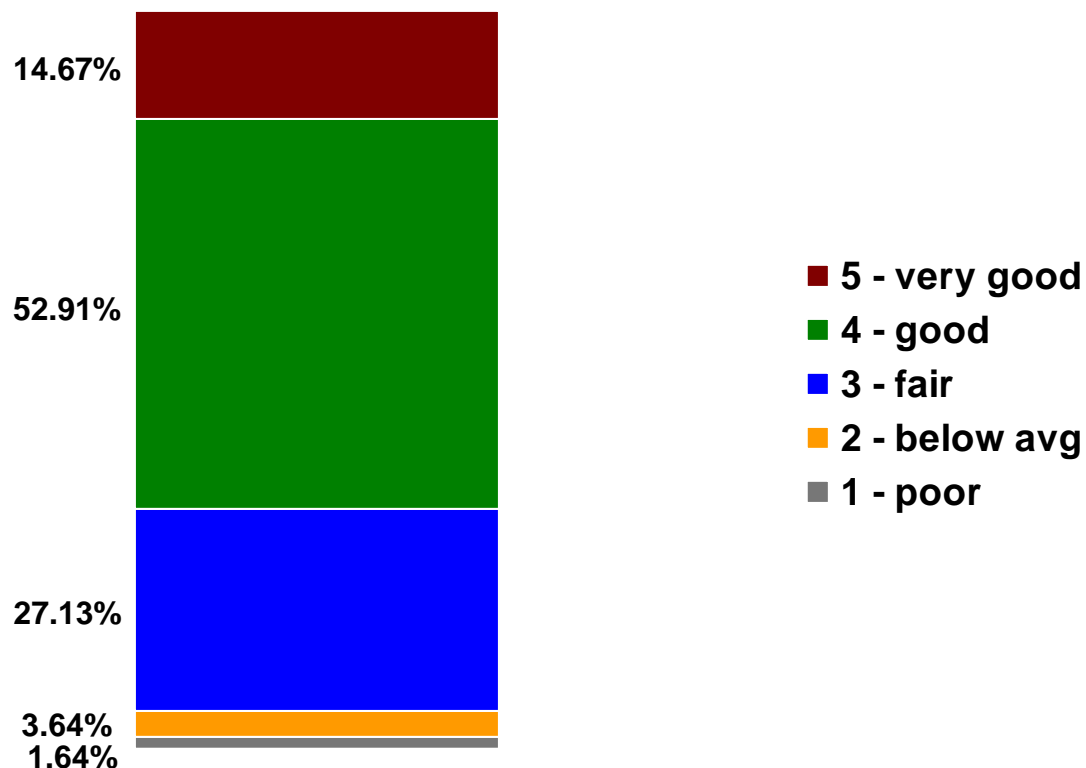
Standard deviations are calculated based on sample representations of the entire population.



## How would you rate the overall reliability of our roads?

Mean ( $\mu$ ): 3.75

Standard  
Deviation ( $\sigma$ ): 0.807



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

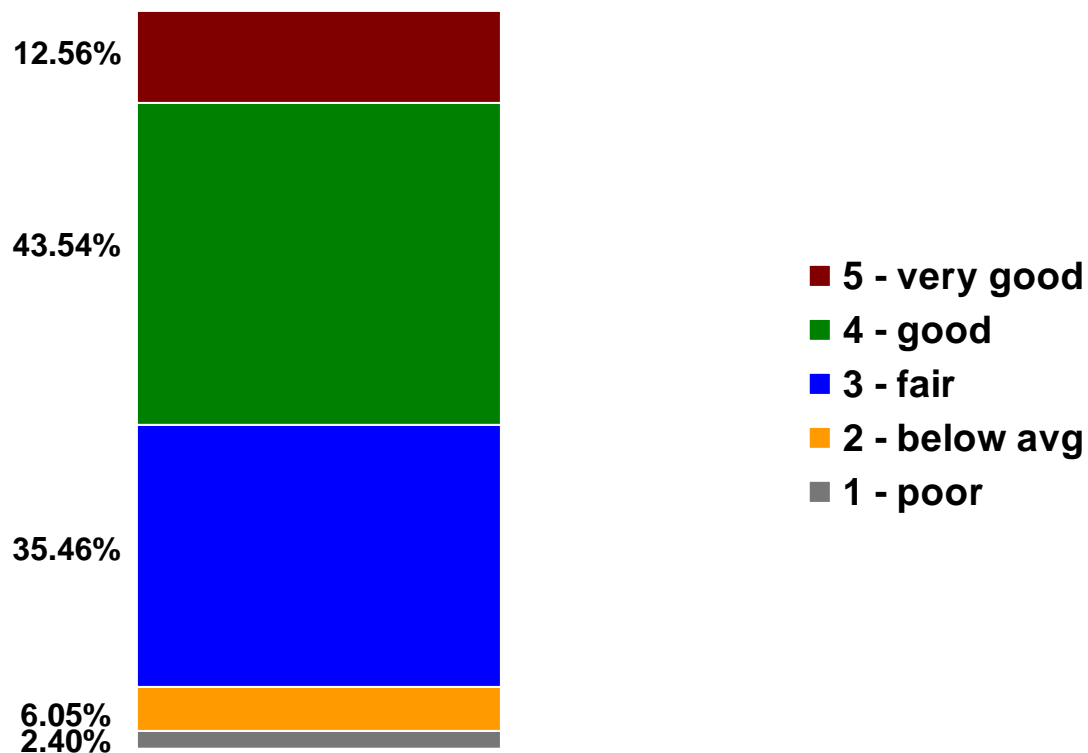
Standard deviations are calculated based on sample representations of the entire population.



As you are driving the state roads, how would you rate the overall aesthetics of our roads?

Mean ( $\mu$ ): 3.58

Standard  
Deviation ( $\sigma$ ): 0.872



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

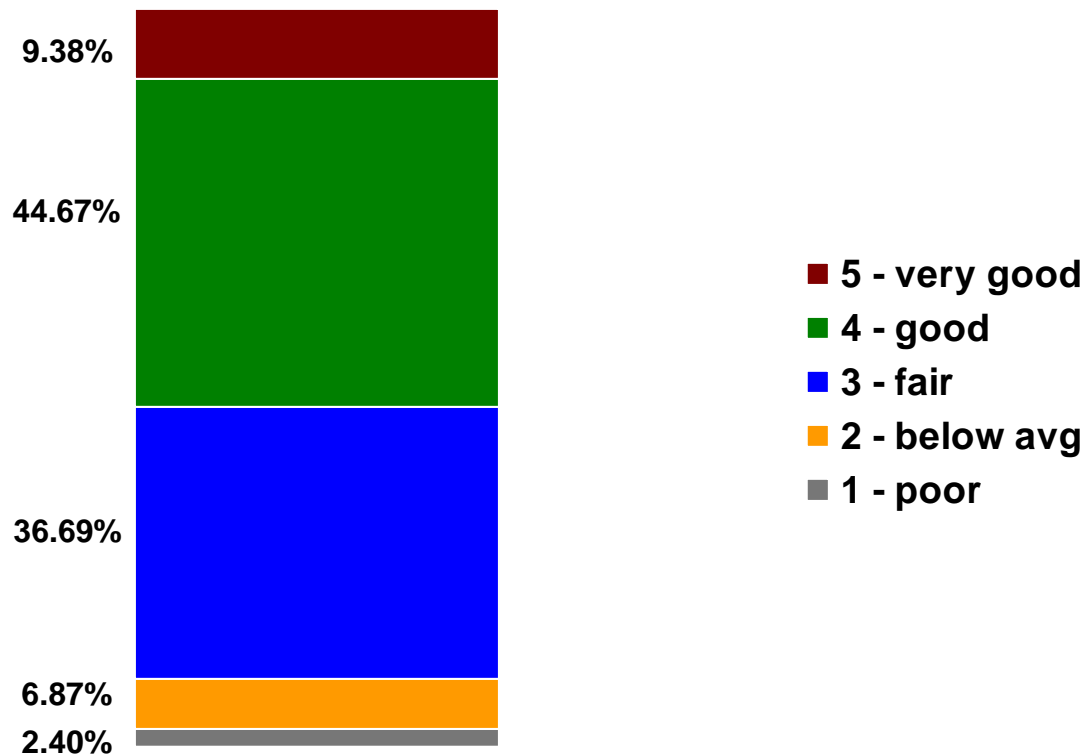
Standard deviations are calculated based on sample representations of the entire population.



## How would you rate the overall comfort of our roads?

Mean ( $\mu$ ): 3.52

Standard  
Deviation ( $\sigma$ ): 0.848



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

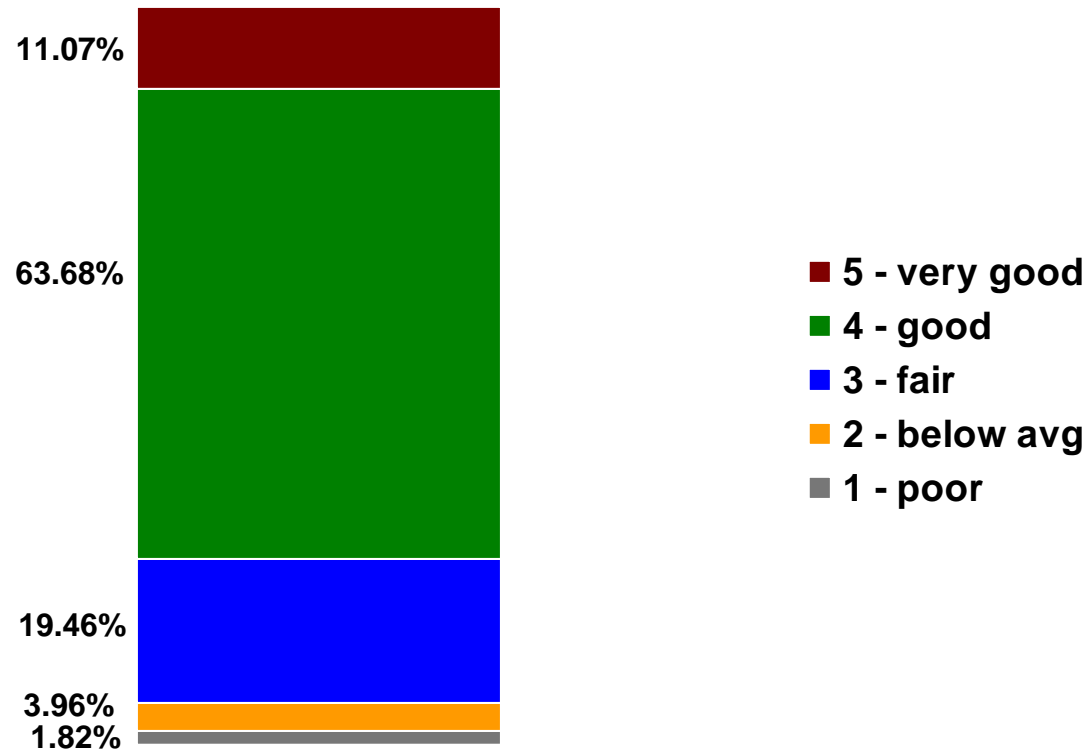
Standard deviations are calculated based on sample representations of the entire population.



## How would you rate the overall maintenance of state highways (interstates, state routes, etc.)?

Mean ( $\mu$ ): 3.78

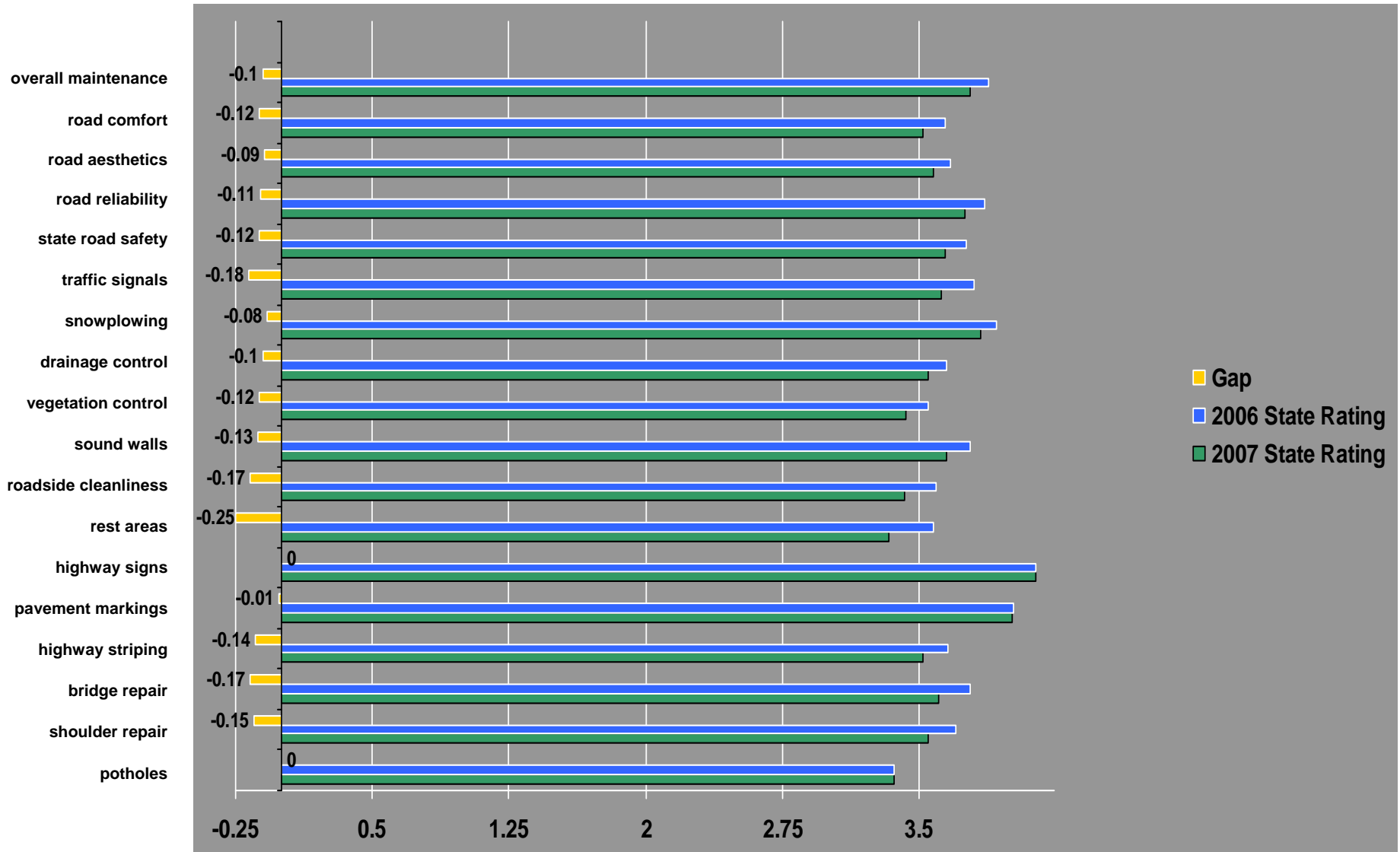
Standard  
Deviation ( $\sigma$ ): 0.762



\*Percentages equal less than 100% due to not-applicable answers

Mean calculations include only those who responded with a quantifiable answer.

Standard deviations are calculated based on sample representations of the entire population.





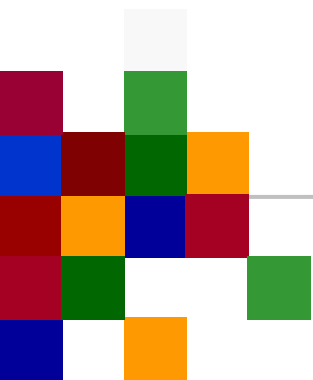
Changes in mean scores can occur because of two separate causes. The first is due to sampling procedures and the second is due to some variable driving a change in the score- we can thus discredit the null hypothesis. Typically, confidence levels of 95% or higher are required to draw a strong correlation coefficient between scores.

i.e. If 2007 scores are higher than 2006 scores and the confidence level is greater than 95%, it can be concluded that some outside factor (UDOT activities) caused the change

Question	2006 Score	2007 Score	Confidence Level
Potholes	3.36	3.36	21.8%
Shoulder Repair	3.70	3.55	100%
Bridge Repair	3.78	3.61	100%
Highway Striping	3.66	3.52	100%
Pavement Markings	4.02	4.01	38.8%
Highway Signs	4.14	4.14	100%
Rest Areas	3.58	3.33	100%
Roadside Cleanliness	3.59	3.42	100%
Sound Walls	3.78	3.65	100%

Question	2006 Score	2007Score	Confidence Level
Vegetation Control	3.55	3.43	100%
Drainage Control	3.65	3.55	99.9%
Snowplowing	3.92	3.84	99.8%
Traffic Signs	3.80	3.62	100%
State Road Safety	3.76	3.64	100%
Road Reliability	3.86	3.75	100%
Road Aesthetics	3.67	3.58	99.9%
Road Comfort	3.64	3.52	100%
Overall Maintenance	3.88	3.78	100%





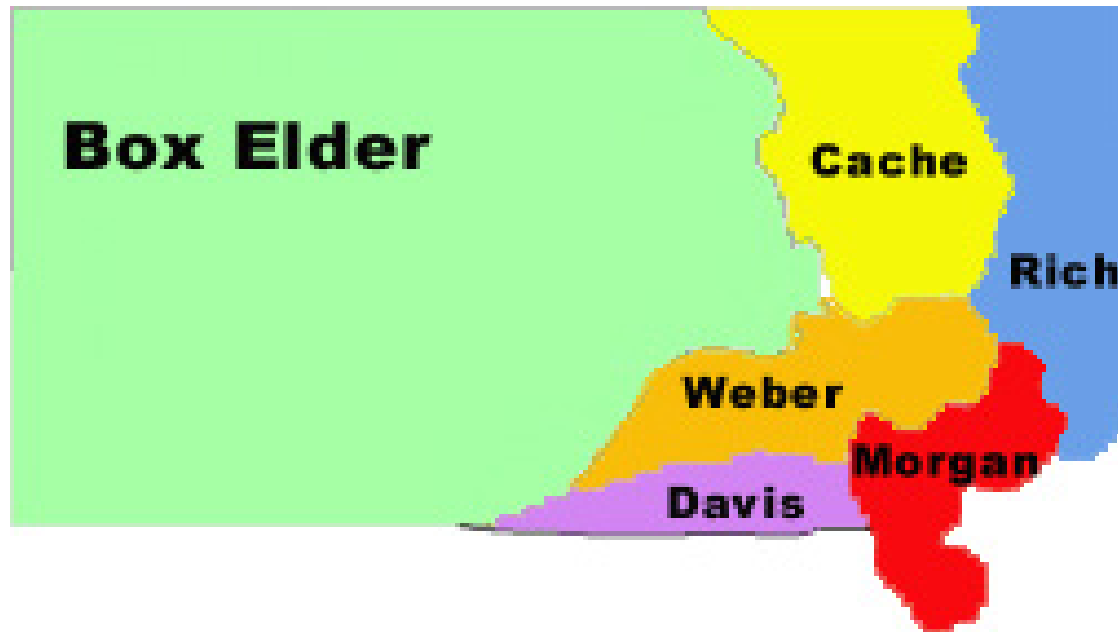
## > Regional Results Analysis

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Region One consists of residents in Box Elder, Davis [north], Weber, Morgan, Cache, and Rich counties. This region of the state represents roughly 20% of the total state population. As such, 545 surveys were conducted in this region.

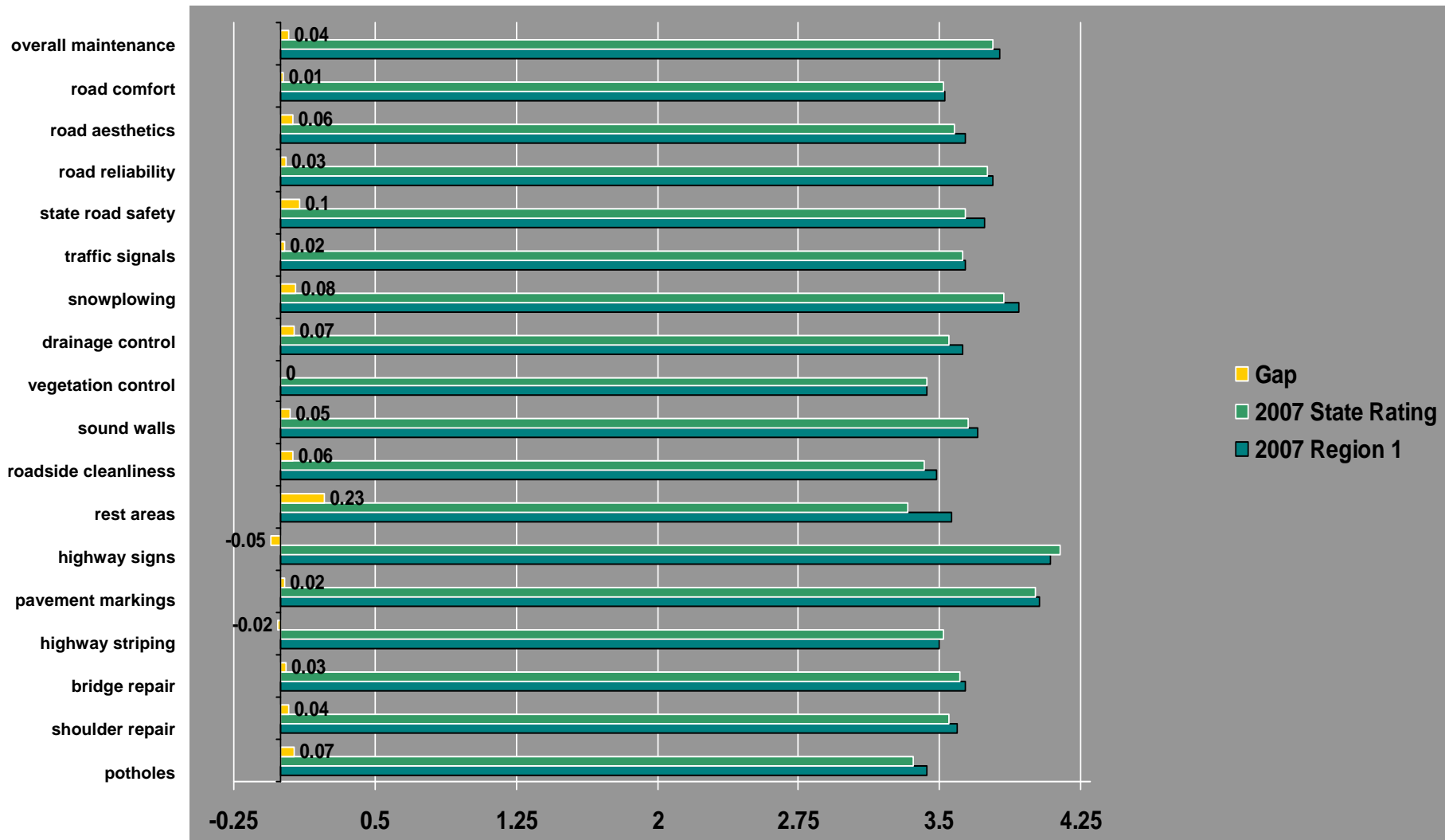




A gap analysis was performed by comparing regional scores in Region One with the mean scores that were obtained at the state level.

Region One had two negative gap scores in questions relating to highway signs (-0.05) and highway markings (-0.02). 15 of the 18 gaps were positive, with the most positive gap score (0.23) in rest areas. A breakdown of gap scores is as follows:

Gap Score	Percentage at or Above Gap Score	Gap Score	Percentage at or Above Gap Score
-0.25	100%	0	88.9%
-0.20	100%	0.05	50%
-0.15	100%	0.10	11.1%
-0.10	100%	0.15	5.6%
-0.05	100%	0.20	5.6%





Changes in mean scores can occur because of two separate causes. The first is due to sampling procedures and the second is due to some variable driving a change in the score- we can thus discredit the null hypothesis. Typically, confidence levels of 95% or higher are required to draw a strong correlation coefficient between scores.

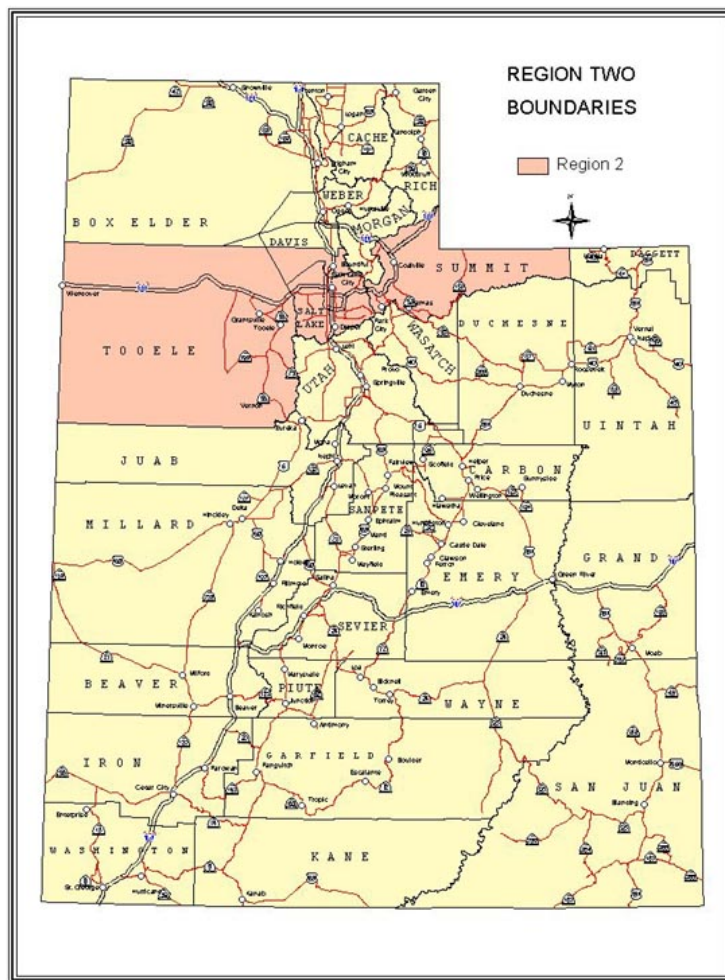
i.e. If 2007 scores are higher than 2006 scores and the confidence level is greater than 95%, it can be concluded that some outside factor (UDOT activities) caused the change

Question	2006 Score	2007 Score	Confidence Level
Potholes	3.34	3.43	87.6%
Shoulder Repair	3.71	3.59	96.7%
Bridge Repair	3.73	3.64	82.2%
Highway Striping	3.67	3.50	98.6%
Pavement Markings	4.00	4.03	36.8%
Highway Signs	4.09	4.09	03.3%
Rest Areas	3.76	3.56	99.3%
Roadside Cleanliness	3.67	3.48	99.9%
Sound Walls	3.85	3.70	98.6%

Question	2006 Score	2007 Score	Confidence Level
Vegetation Control	3.55	3.43	96.3%
Drainage Control	3.63	3.62	09.5%
Snowplowing	3.91	3.92	20.4%
Traffic Signs	3.76	3.64	96.1%
State Road Safety	3.83	3.74	91.8%
Road Reliability	3.85	3.78	86.8%
Road Aesthetics	3.69	3.64	62.9%
Road Comfort	3.67	3.53	99.6%
Overall Maintenance	3.89	3.82	86.7%



Region Two consists of residents in Tooele, Salt Lake, Summit, and Davis [south] counties. This region of the state represents roughly 45% of the total state population. As such, 1248 surveys were conducted in this region.



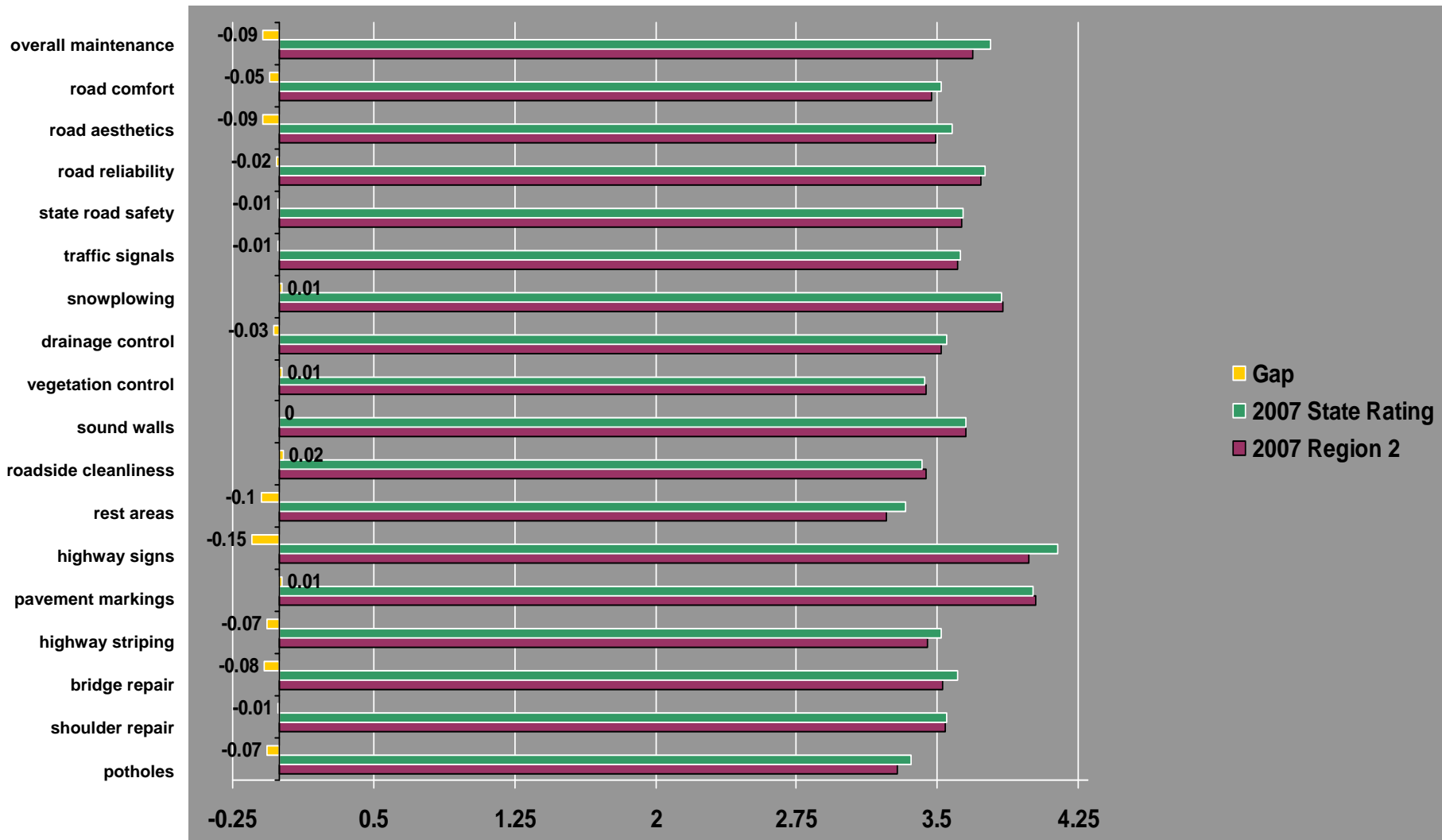


A gap analysis was performed by comparing regional scores in Region Two with the mean scores that were obtained at the state level.

Region Two had its most positive gap score in roadside cleanliness (0.02) and its most negative gap score in highway signs (-0.15) when compared to state levels. 13 of the 18 gaps were negative.

A breakdown of gap scores is as follows:

Gap Score	Percentage at or Above Gap Score	Gap Score	Percentage at or Above Gap Score
-0.25	100%	0	27.8%
-0.20	100%	0.05	0%
-0.15	100%	0.10	0%
-0.10	94.4%	0.15	0%
-0.05	61.1%	0.20	0%







Changes in mean scores can occur because of two separate causes. The first is due to sampling procedures and the second is due to some variable driving a change in the score- we can thus discredit the null hypothesis. Typically, confidence levels of 95% or higher are required to draw a strong correlation coefficient between scores.

i.e. If 2007 scores are higher than 2006 scores and the confidence level is greater than 95%, it can be concluded that some outside factor (UDOT activities) caused the change

Question	2006 Score	2007 Score	Confidence Level
Potholes	3.42	3.29	99.9%
Shoulder Repair	3.69	3.54	100%
Bridge Repair	3.77	3.53	100%
Highway Striping	3.58	3.45	99.5%
Pavement Markings	4.04	4.02	40%
Highway Signs	4.13	3.99	100%
Rest Areas	3.45	3.23	100%
Roadside Cleanliness	3.61	3.44	100%
Sound Walls	3.77	3.65	99.7%

Question	2006 Score	2007 Score	Confidence Level
Vegetation Control	3.49	3.44	74.1%
Drainage Control	3.60	3.52	96.6%
Snowplowing	3.93	3.85	95.9%
Traffic Signs	3.78	3.61	100%
State Road Safety	3.74	3.63	99.9%
Road Reliability	3.84	3.73	99.9%
Road Aesthetics	3.61	3.49	99.9%
Road Comfort	3.64	3.47	100%
Overall Maintenance	3.84	3.69	100%



Region Three consists of residents in Juab, Utah, Wasatch, Duchesne, Uintah, and Daggett counties. This region of the state represents roughly 20% of the total state population. As such, 633 surveys were conducted in this region.

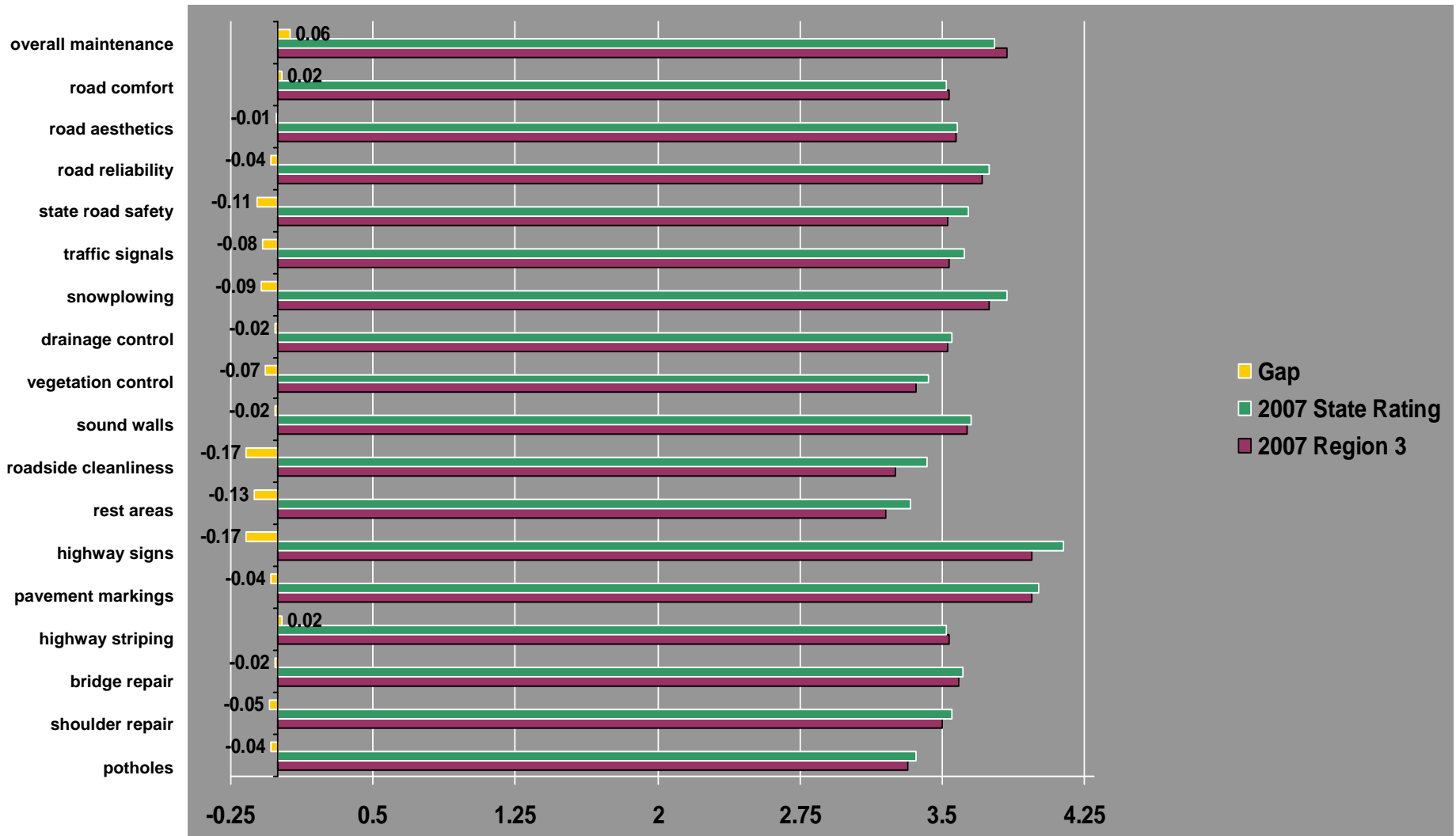




A gap analysis was performed by comparing regional scores in Region Three with the mean scores that were obtained at the state level.

Region Three had its most positive gap score in overall maintenance (0.06) and its most negative gap score in roadside cleanliness and highway signs (-0.17) when compared to state levels. A breakdown of gap scores is as follows:

Gap Score	Percentage at or Above Gap Score	Gap Score	Percentage at or Above Gap Score
-0.25	100%	0	16.7%
-0.20	100%	0.05	5.6%
-0.15	88.9%	0.10	0%
-0.10	77.8%	0.15	0%
-0.05	61.1%	0.20	0%





Changes in mean scores can occur because of two separate causes. The first is due to sampling procedures and the second is due to some variable driving a change in the score- we can thus discredit the null hypothesis. Typically, confidence levels of 95% or higher are required to draw a strong correlation coefficient between scores.

i.e. If 2007 scores are higher than 2006 scores and the confidence level is greater than 95%, it can be concluded that some outside factor (UDOT activities) caused the change

Question	2006 Score	2007 Score	Confidence Level
Potholes	3.23	3.32	83.8%
Shoulder Repair	3.71	3.50	100%
Bridge Repair	3.82	3.59	100%
Highway Striping	3.70	3.54	99.2%
Pavement Markings	3.95	3.97	22.6%
Highway Signs	4.18	3.97	100%
Rest Areas	3.59	3.20	100%
Roadside Cleanliness	3.42	3.25	99.4%
Sound Walls	3.75	3.63	96.9%

Question	2006 Score	2007 Score	Confidence Level
Vegetation Control	3.59	3.36	100%
Drainage Control	3.72	3.53	100%
Snowplowing	3.88	3.75	98.7%
Traffic Signs	3.85	3.54	100%
State Road Safety	3.73	3.53	100%
Road Reliability	3.85	3.71	99.8%
Road Aesthetics	3.71	3.57	99.5%
Road Comfort	3.64	3.54	96%
Overall Maintenance	3.94	3.84	98.4%



**Region Four consists of residents in Carbon, Emery, Grand, San Juan, Sanpete, Sevier, Piute, Wayne, Garfield, Kane, Millard, Iron, Beaver, and Washington counties. This region was further broken down into three separate districts depending on geographic location. District specific findings are reported compared to regional findings in the following pages. This region of the state represents roughly 15% of the total state population. As such, 394 surveys were conducted in this region.**

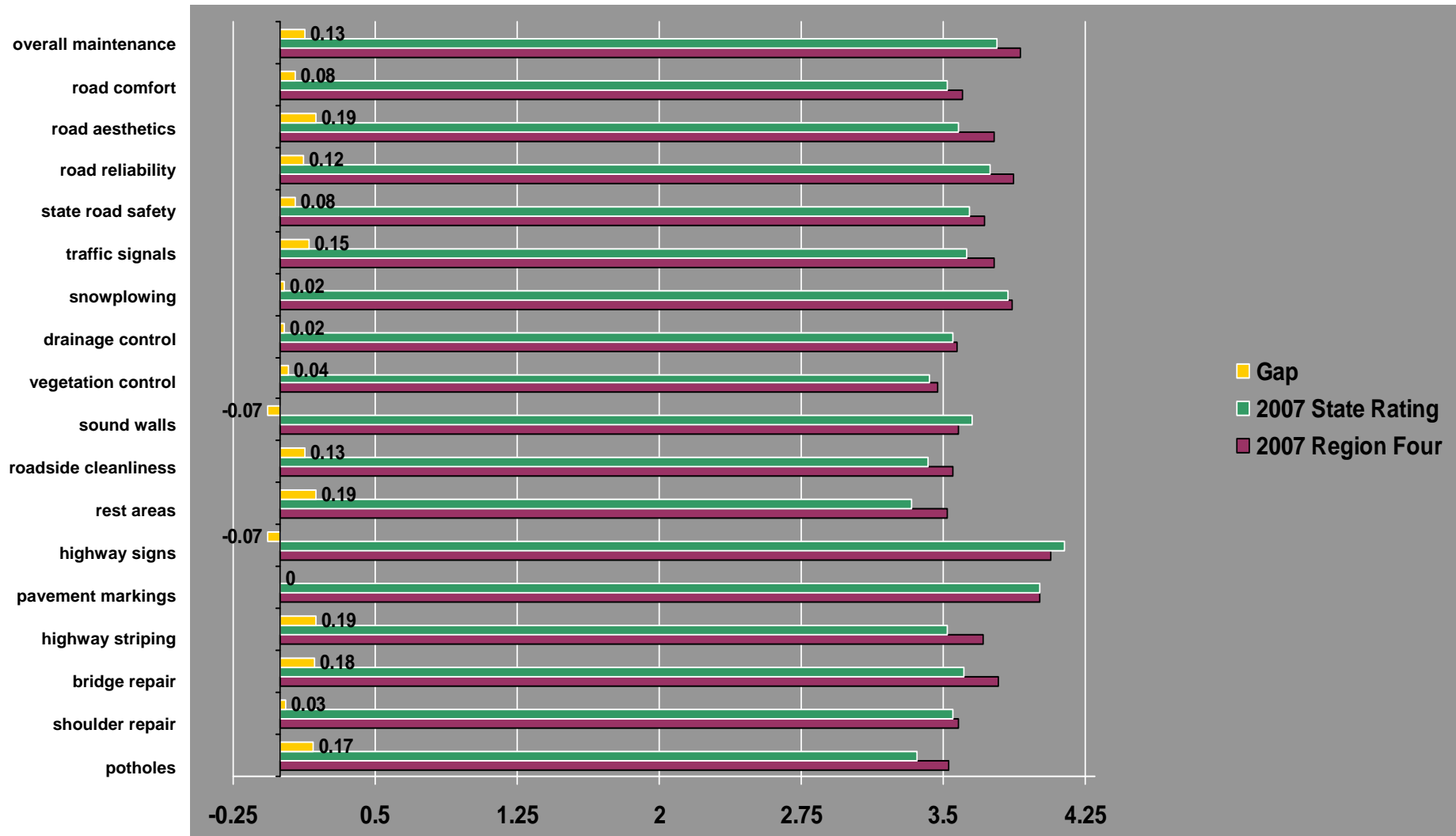




A gap analysis was performed by comparing regional scores in Region Four with the mean scores that were obtained at the state level.

Region Four had its most positive gap score in road aesthetics, rest areas, and highway striping (0.19) and its most negative gap score in sound walls and highway signs (-0.07) when compared to state levels. Only two of the scores were below state averages. A breakdown of gap scores is as follows:

Gap Score	Percentage at or Above Gap Score	Gap Score	Percentage at or Above Gap Score
-0.25	100%	0	88.9%
-0.20	100%	0.05	61.1%
-0.15	100%	0.10	50%
-0.10	100%	0.15	33.3%
-0.05	88.9%	0.20	0%







Changes in mean scores can occur because of two separate causes. The first is due to sampling procedures and the second is due to some variable driving a change in the score- we can thus discredit the null hypothesis. Typically, confidence levels of 95% or higher are required to draw a strong correlation coefficient between scores.

i.e. If 2007 scores are higher than 2006 scores and the confidence level is greater than 95%, it can be concluded that some outside factor (UDOT activities) caused the change

Question	2006 Score	2007 Score	Confidence Level
Potholes	3.45	3.53	67.9%
Shoulder Repair	3.67	3.58	76.9%
Bridge Repair	3.85	3.79	56.4%
Highway Striping	3.95	3.71	99.6%
Pavement Markings	4.13	4.01	93.1%
Highway Signs	4.13	4.07	64.7%
Rest Areas	3.76	3.52	99.0%
Roadside Cleanliness	3.69	3.55	94.4%
Sound Walls	3.82	3.58	99.9%

Question	2006 Score	2007 Score	Confidence Level
Vegetation Control	3.71	3.47	99.9%
Drainage Control	3.73	3.57	98.3%
Snowplowing	4.00	3.86	95.1%
Traffic Signs	3.89	3.77	88.0%
State Road Safety	3.76	3.72	36.2%
Road Reliability	3.95	3.87	84.5%
Road Aesthetics	3.84	3.77	70.4%
Road Comfort	3.59	3.60	11.0%
Overall Maintenance	3.92	3.91	15.1%

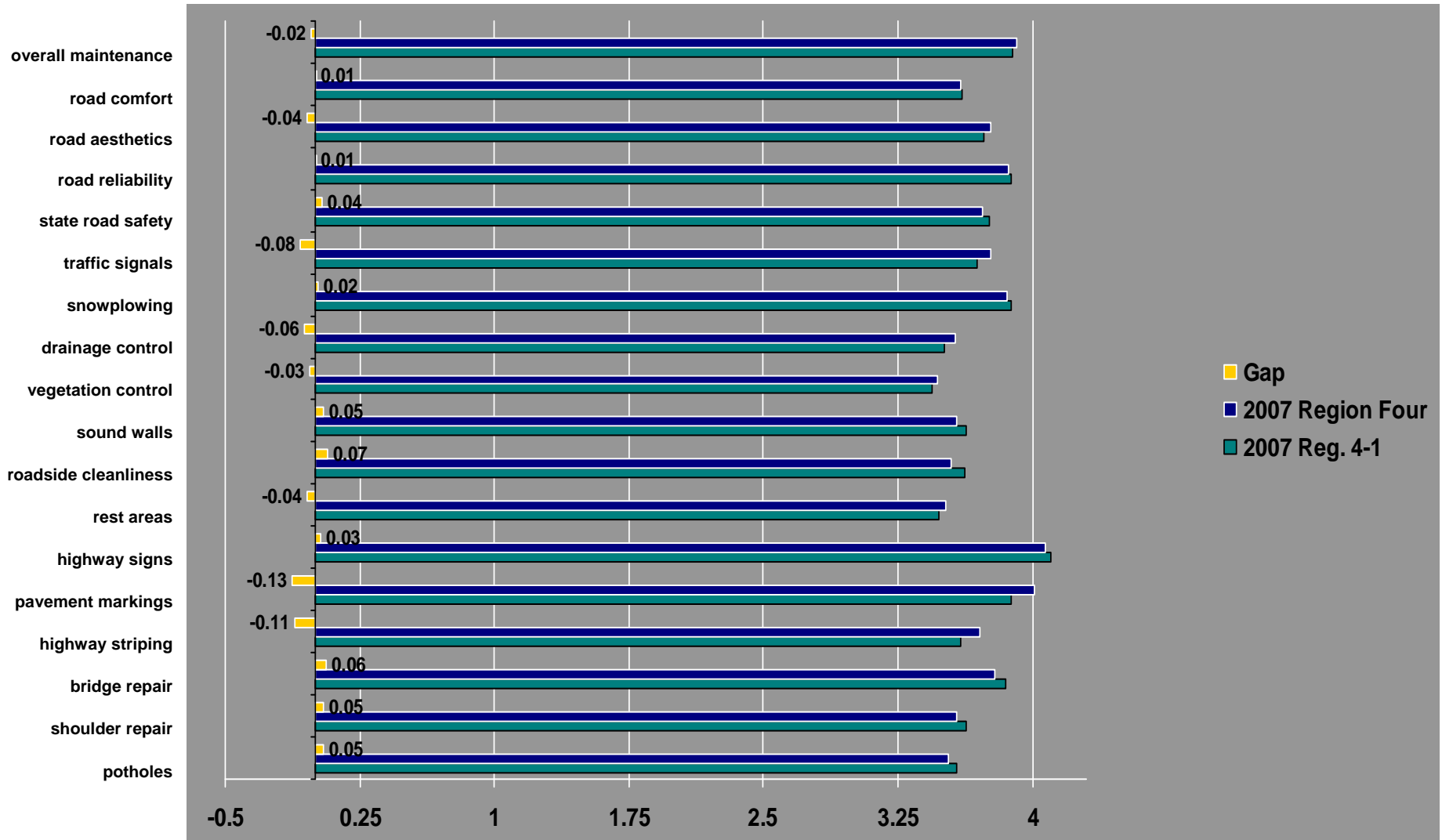


**Cedar City District consists of residents in Millard, Iron, Beaver, and Washington counties. Within Cedar City District, 173 surveys were completed.**

**A gap analysis was performed by comparing regional scores in Cedar City District with the mean scores that were obtained within Region Four.**

**A breakdown of gap scores is shown in the following graph:**

Gap Score	Percentage at or Above Gap Score	Gap Score	Percentage at or Above Gap Score
-0.25	100%	0	55.6%
-0.20	100%	0.05	27.8%
-0.15	100%	0.10	0%
-0.10	88.9%	0.15	0%
-0.05	77.8%	0.20	0%



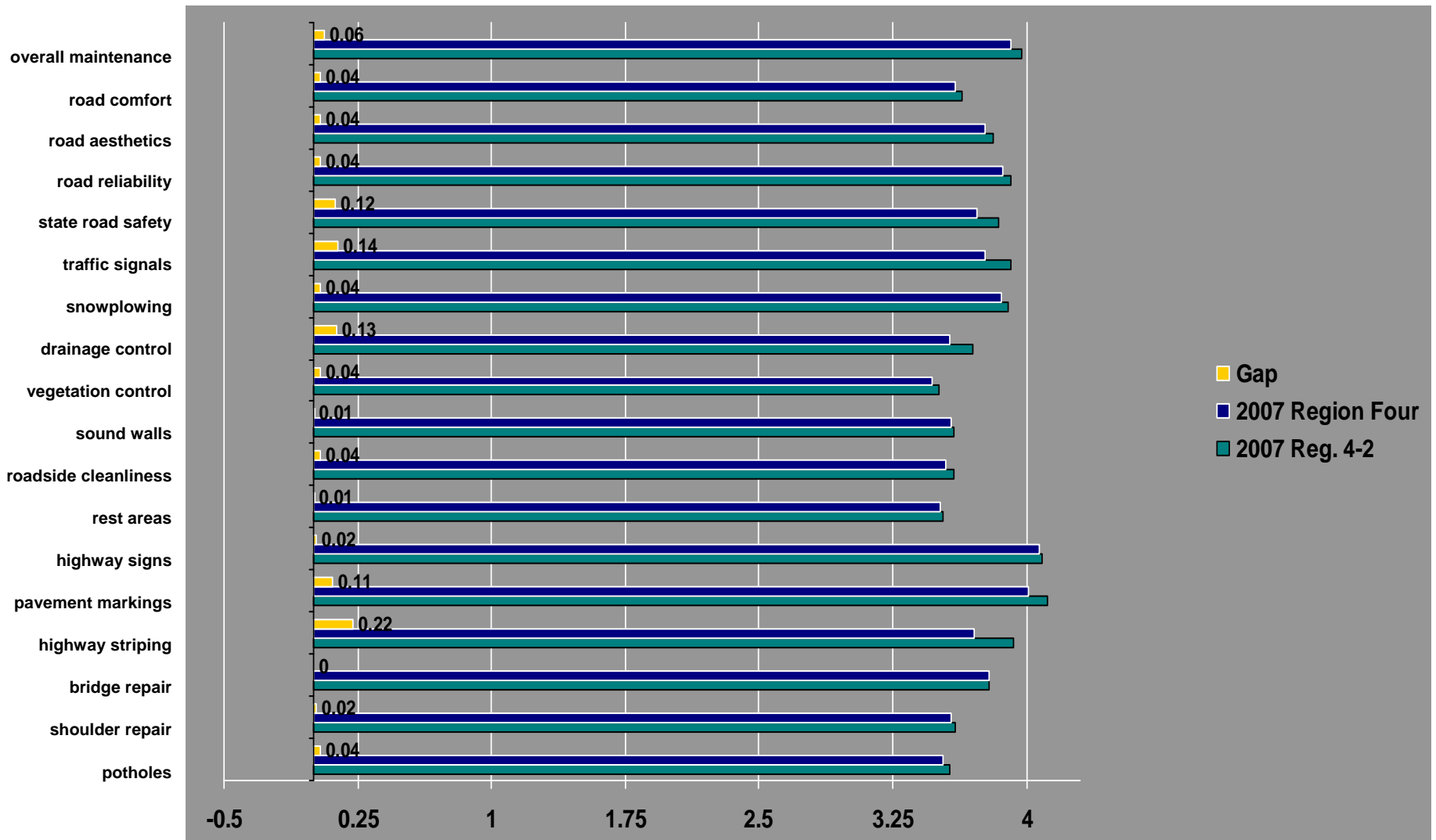


Richfield District consists of residents in Sanpete, Sevier, Piute, Wayne, Garfield, and Kane counties. Within Richfield District, 165 surveys were completed.

A gap analysis was performed by comparing regional scores in Richfield District with the mean scores that were obtained within Region Four.

A breakdown of gap scores is shown in the following graph:

Gap Score	Percentage at or Above Gap Score	Gap Score	Percentage at or Above Gap Score
-0.25	100%	0	100%
-0.20	100%	0.05	33.3%
-0.15	100%	0.10	27.8%
-0.10	100%	0.15	5.6%
-0.05	100%	0.20	5.6%



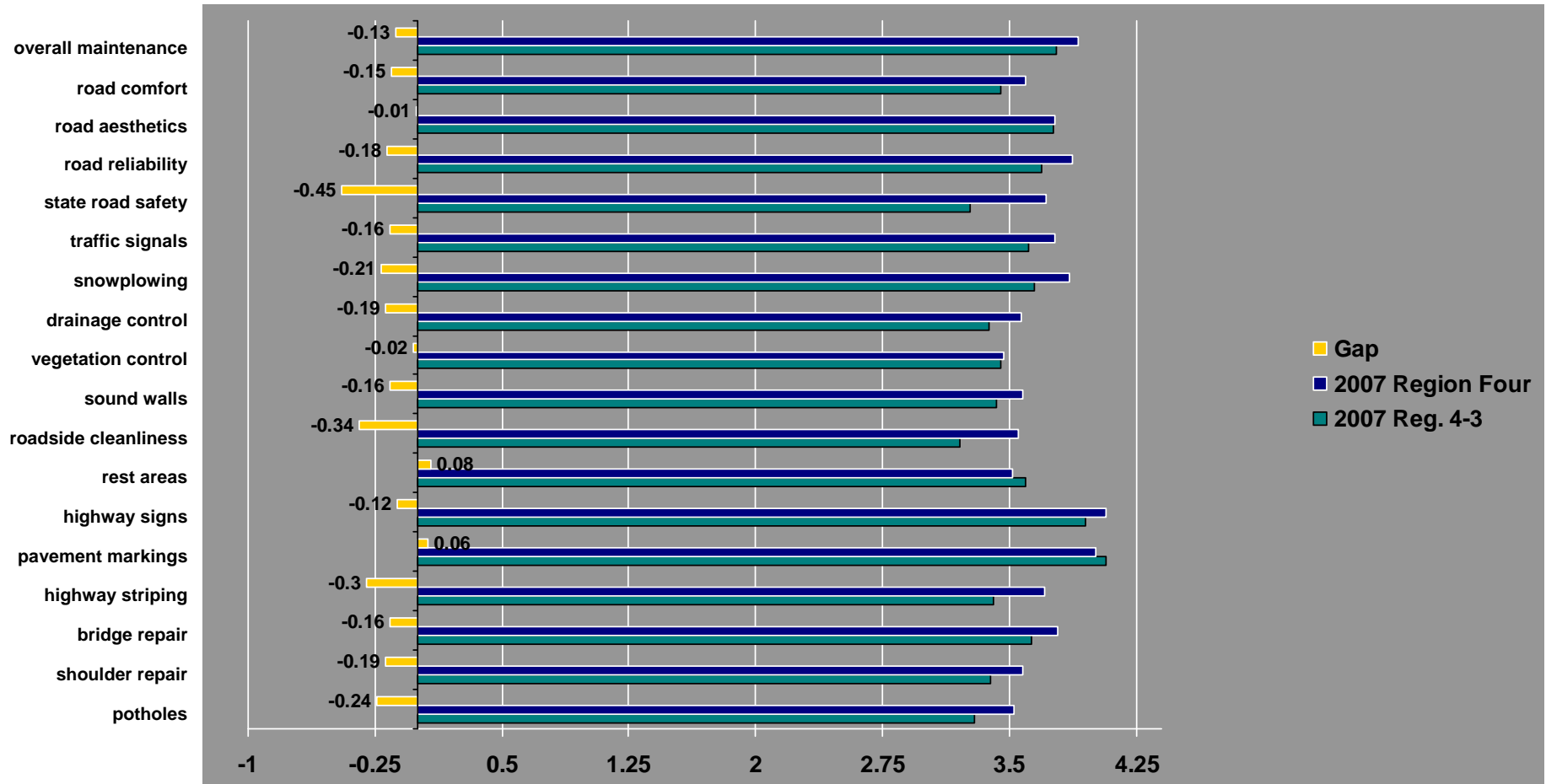


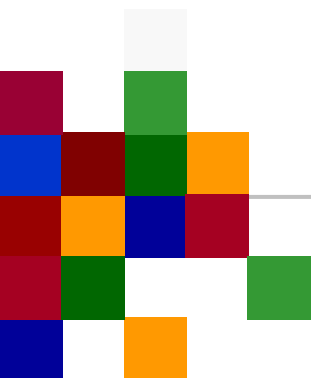
Price District consists of residents in Carbon, Emery, Grand, and San Juan counties. Within Price District, 56 surveys were completed.

A gap analysis was performed by comparing regional scores in Price District with the mean scores that were obtained within Region Four. Due to the low number of surveys taken in this district, gap scores were again dramatic.

A breakdown of gap scores is on the following graph:

Gap Score	Percentage at or Above Gap Score	Gap Score	Percentage at or Above Gap Score
-0.25	83.3%	0	11.1%
-0.20	72.2%	0.05	11.1%
-0.15	38.9%	0.10	0%
-0.10	22.2%	0.15	0%
-0.05	22.2%	0.20	0%





## > Qualitative Results Summary

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Comments were consistent across all regions and in general referred to the quantity of potholes and the lack of attention that is given to them. Several comments referred to the lack of urgency to get these filled in a timely manner.

There were no comments given for individuals who rated pothole maintenance above a fair rating. Sample specific comments are included below-

- >A lot of potholes to fix
- >sometimes they're not filled in as soon as they could be.
- >there are a lot of potholes
- >A lot of potholes on back streets
- >A lot of roads that the edge wears out
- >They fix them and they come back quickly
- >A lot of potholes in the spring and fall
- >The secondary roads are falling apart
- >Takes a long time to get them fixed
- >Don't fix them fast enough
- >Could do a better job
- >Average
- >Everything is dug up
- >Few spots that are bad
- >Patched, but not fixed
- >HWY 89 potholes are very deep
- >It takes forever to get them filled



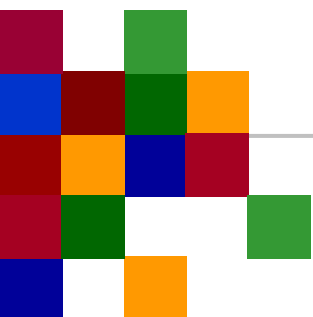
Comments for Highway Striping were similar across all regions. There were two major areas that had needs for improvement- fading and frequency of painting.

- > A lot of crosswalks are worn
- > Average
- > They look like they are in good shape
- > A few crosswalks aren't marked as well
- > Need to use reflective paint
- > A lot of them are faded
- > Can't see the lines need to be repainted more often
- > Confusing with the construction on I-15
- > Construction messes them up
- > Can't see them in the rain
- > Can't see them at night
- > Dim
- > Paint doesn't last long enough
- > Need to be darker
- > Need to be done more than once a year



Again, similar comments reigned for each of the regions. The most common response dealt with road construction and length of time to make repairs. Comments for needing improvement included:

- >The roads are rough
- >Some places need work, mostly because of growth
- >Hard to find a way around the construction
- >Roads are well maintained, but striping is dreadful
- >A lot of construction
- >Takes to long to repair
- >Construction never ceases
- >A lot of trashy areas
- >Dangerous skinny roads with no shoulders
- >Hard to see at night or in the rain
- >Ripped up roads from trucks
- >Lots of maintenance
- >Lots of potholes
- >Lots of bumps and cracks
- >Room for improvement
- >The pavement is often cracked
- >A lot of frost damage
- >Need more guardrails
- >Not smooth
- >Whenever they dig up for pipe lines, they don't get fixed very good



## > Appendix

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**Survey questions were developed to objectively measure current public perceptions.**

Highlight	Question Verbiage
Potholes	> How would you rate the maintenance of potholes and poor pavement?***
Shoulder Repair	> How would you rate our roadside shoulder repair?
Bridge Repair	> How would you rate our bridge repair?
Highway Striping	> How would you rate our Highway striping (painted lines)?
Pavement Markings	> How would you rate other pavement markings such as school crossings, turn arrows, crosswalks, and others? ***
Highway Signs	> How do you rate our Highway signs?
Rest Areas	> How do you rate our rest areas?
Roadside Cleanliness	> How do you rate the cleanliness of our roadsides?
Sound Walls	> How do you rate our fencing and/or sound walls?

\*\*\* Individuals were asked why they gave their rating on this question.



**Survey questions were developed to objectively measure current public perceptions.**

Highlight	Question Verbiage
<b>Vegetation Control</b>	> How do you rate our vegetation control?
<b>Drainage Control</b>	> How do you rate our drainage and erosion control?
<b>Snowplowing</b>	> How do you rate our snowplowing?
<b>Traffic Signals</b>	> How do you rate our traffic signals?
<b>State Road Safety</b>	> As you are driving the state roads, how would you rate the overall safety of our roads?
<b>Road Reliability</b>	> How would you rate the reliability of our roads?
<b>Road Aesthetics</b>	> As you are driving the state roads, how would you rate the overall aesthetics of our roads?
<b>Road Comfort</b>	> How would you rate the overall comfort of our roads?
<b>Overall Maintenance</b>	> How would you rate the overall maintenance of state highways (Interstates, State Routes, etc.)? ***

\*\*\* Individuals were asked why they gave their rating on this question.



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